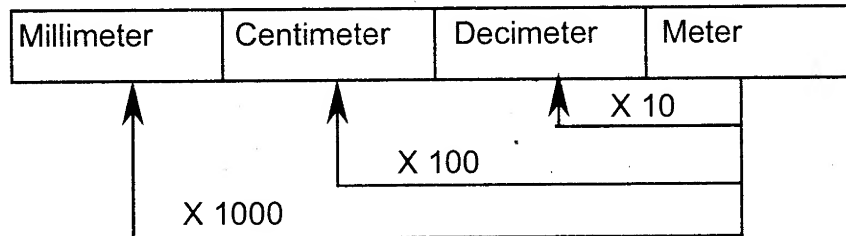


Objective: Change meter to decimeter, centimeter, and millimeter.

Study

The units of a meter are dm, cm, and mm.

To change a meter to its smaller units we multiply by 10, 100, and 1000 as shown in the figure .



Remember: When we multiply by 10 add 1 zero

When we multiply by 100 add 2 zeros

When we multiply by 1000 add 3 zeros

Example: $4\text{m} \times 10 = 40\text{ dm}$

$4\text{m} \times 100 = 400\text{ cm}$

$4\text{m} \times 1000 = 4000\text{ mm}$

Practice

1. Write the answers and the unit

a. $15\text{ m} \times \quad = 5000\text{ mm}$

d. $700\text{ dm} \times 10 =$

b. $30\text{ m} \times 100 =$

e. $60\text{ dm} \times \quad = 6000\text{ mm}$

c. $180\text{ m} \times \quad = 180\text{ dm}$

f. $400\text{ cm} \times 10 =$

2. The length of a wall is 12 m. What is the length in cm?

3. The width of a house is 17 m. Change the width of the house to dm.

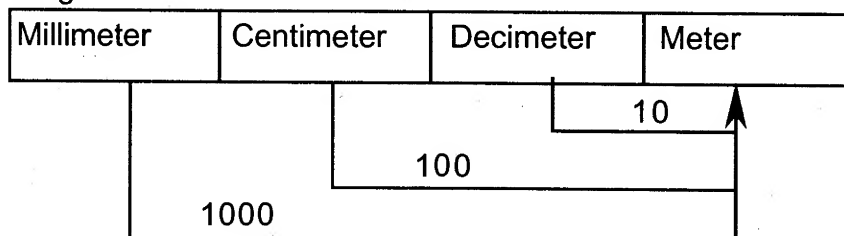
4. The length of a wall is 120 dm. What is the length in mm?

5. The length of a wall is 130 m. What is the length in cm?

Objective: Change from millimeter to centimeter, decimeter, and meter.

Study

To change smaller units of a meter to larger units, we divide by 10, 100, 1000 as shown in the figure.



Remember: When we divide a number by 10, 100, 1000 we count the number of zeros in the divisor and cross out the same number of zeros from the dividend.

Example:

$$\begin{array}{lcl} 3000 \text{ mm} & 1000 = & 3 \text{ m} \\ 3000 \text{ cm} & 100 = & 30 \text{ m} \\ 300 \text{ dm} & 10 = & 30 \text{ m} \end{array}$$

Practice

1. Find the missing number by changing the unit

a. $450,000 \text{ mm} = 450 \text{ m}$

e. $10 = 4 \text{ m}$

b. $300 \text{ cm} = 3 \text{ m}$

f. $100 = 25 \text{ m}$

c. $300 \text{ dm} = 30 \text{ m}$

g. $1,000 = 5 \text{ m}$

2. Change to m

a. $20,000 \text{ mm} \quad 1000 = \quad \text{m}$

d. $340,000 \text{ cm} \quad 1000 = \quad \text{m}$

b. $45,000 \text{ cm} \quad 100 = \quad \text{m}$

e. $180,00 \text{ cm} \quad 100 = \quad \text{m}$

c. $300 \text{ dm} \quad 10 = \quad \text{m}$

f. $120,00 \text{ dm} \quad 10 = \quad \text{m}$

3. The length of a ruler is 1,000 mm. Express the length of the ruler in m.

4. The length of a wall is 2,000 cm. What is the length in m?

5. The width of a house is 220 dm. Change the width to m.

Objective: Review measurement of length

Study

Zohra's shawl is 2 m long. Write the length of the shawl in cm.

$$2 \text{ m} \times 100 = 200 \text{ cm}$$

She bought 3000 mm of ribbon to put around the border. How many meters did she buy?

$$3000 \div 1000 = 3 \text{ meters.}$$

Practice

1. Write the unit of measurement used in measuring
 - a. The length of a page
 - b. The length of a room
2. Complete the pattern by changing the unit

a.	371 m	cm
b.	1488 m	dm
c.	3974 m	cm
d.	343 m	mm

3. Complete the pattern by changing the unit

a.	1200 cm	m
b.	270000 mm	m
c.	3800 dm	m
d.	298000 mm	m

4. The length of a carpet is 6 meter. What is the length in millimeters?
5. The length of a ribbon is 2,500 centimeters. What is the length in meters?

Objective: Assess measurement of length.

1. Complete the pattern by changing the unit

a.	5 m	mm
b.	50 m	dm
c.	8 m	dm
d.	30 m	cm

2. Change to meters.

a. 120,000 mm =

d. 420,000 mm =

b. 1,340,000 cm =

e. 32,100 dm =

d. 52,000 dm =

f. 142,000 cm =

3. Find the answers by changing the unit

a. 1200 m x 1000 =

d. 30000 mm 1000 =

b. 13500 m x 100 =

e. 5000 cm 100 =

c. 1200 m x 10 =

f. 3200 dm 10 =

4. The length of a blackboard is 2,000 millimeters. Express the length of the blackboard in meters.
5. The width of a room is 30 decimeters. Change the width to meters.
6. The length of a wall is 25 meters. What is the length in millimeters?
7. The height of a tree is 20 meters. What is the height in centimeters?

Objective: Introduce the parts of a kilometer.

Study

Kilometer is a unit of measuring length. A kilometer has smaller units decameter (dcm), hectometer (hm), meter (m).

$$1 \text{ km} = 10 \text{ dcm}$$

$$1 \text{ km} = 100 \text{ hm}$$

$$1 \text{ km} = 1000 \text{ m}$$

We use kilometers to measure long distances, such as the distance between cities.

Practice

1. Complete the pattern (*Change the unit*)

a.	1 km	m
b.	2 km	m
c.	3 km	m
d.	4 km	m

2. Which is the better measurement, a or b, for:

1. distance from home to school a) cm b) km
2. distance of a bus trip a) m b) km
3. length of a soccer field a) km b) m
4. width of the teacher's desk a) km b) m

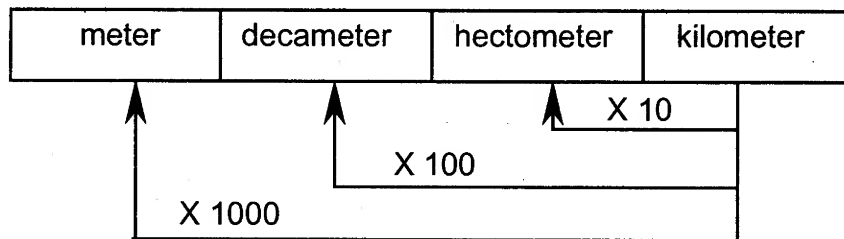
3. Complete. Write m or km.

- a. The distance between two cities is 85 ____
- b. The length of a carpet is 2 ____
- c. the length of the road from Kabul to Jalalabad is 150 ____
- d. The length of the classroom is 5 ____

Objective: Change from kilometer to hectometer, decameter and meter.

Study

To change a kilometer to its smaller units we multiply by 10, 100, and 1,000 as shown in the figure .



Practice

1. Find the answers

a. $14 \text{ km} \times 1,000 =$

g. $121 \text{ dcm} \times = 1,210 \text{ m}$

b. $12 \text{ km} \times 10 =$

h. $190 \text{ hm} \times = 1,900 \text{ dcm}$

c. $120 \text{ km} \times 10 =$

i. $122 \text{ dcm} \times 10 = \text{ hm}$

d. $19 \text{ hm} \times 10 =$

j. $25 \text{ km} = \text{ dcm}$

e. $17 \text{ hm} \times = 1,700 \text{ m}$

k. $181 \text{ hm} = \text{ m}$

f. $180 \text{ km} \times = 18,000 \text{ dcm}$

2. The length of a road is 120 kilometers. What is the length in meters?

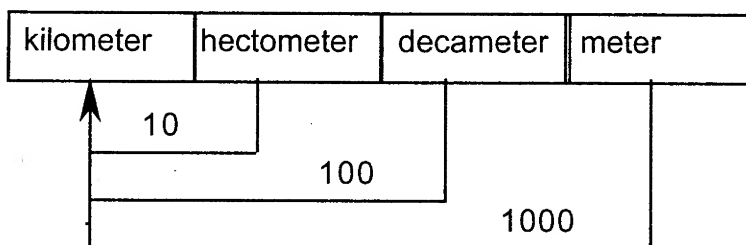
3. The distance from Jalalabad to Torkham is 75 km. Show the distance in dcm.

4. The distance from Kandhar to Trinkot is 104 km. Show the distance in hm.

Objective: Change from meter to decameter, hectometer and kilometer.

Study

To change smaller units of a kilometer to larger units, we divide by 10, 100, and 1000 as shown in the figure.



$$1\text{m} = \frac{1}{10}\text{dc}$$

$$1\text{dc} = \frac{1}{10}\text{hm}$$

$$1\text{hm} = \frac{1}{10}\text{km}$$

Practice

1. Write the missing number by changing the unit

a. 230,000 m 1000 =

b. 5,300 hm 10 =

c. 5,600 dikom 100 =

d. 23,000 m 1.000 =

e. 31,000 dikom 100 =

f. 8,200 hiktom 10 =

2. Change the units in the table

meter	decameter	hectometer	kilometer
240,000			
			50
		400	
	21,000		
			21
		15,000	

3. The length of a street is 3,000 meters. What is the length in kilometers?

4. The length of the road from Torkham to Jalalabad is 75,000 m. Express the length of the road in km.

Objective : Review units of measurement of distance

Study

The length of road from Peshawar to Bajaur is 165,000 m. Express the length of the road in km.

$$165,000 \text{ m} \quad 1,000 = 165 \text{ km.}$$

Practice

1. Find the answers by changing the unit

a. $54 \text{ km} \times 1,000 =$

b. $29 \text{ hm} \times 10 =$

c. $510,000 \text{ m} \quad 1,000 =$

d. $72,000 \text{ dc} \quad 100 =$

e. $1,200 \text{ hm} \quad 10 =$

f. $320 \text{ km} \times 1,000 =$

2. Change to m.

a. $32 \text{ km} \times 1,000 =$

b. $73 \text{ km} \times 1,000 =$

c. $11 \text{ km} \times 1,000 =$

3. Change to km

a. $12,000 \text{ m} =$

b. $30,000 \text{ m} =$

c. $150,000 \text{ m} =$

4. The length of a garden is 1,000 m. What is the length in km?

5. The length of a street is 4 km. What is the length in m?

6. The length of Jalalabad to Asadabad road is 85,000 m. What is the length in km?

7. The length of a road is 420 km. What is the length in m?

Objective: Assess measuring length

1. Which is the better estimate, a or b, for:

- 1) distance from home to the bazaar? a. 5 cm b. 5 km
2) length of a carpet? a. 2 km b. 2 m

2. Complete the table Calculate the units

km	hm	dc	m
		800	
380			
	8,900		
			750,000

4. The distance between Kabul to Jalalabad is 150 km. Write the distance in dc.

5. The length of a farm is 30,000 m. What is its length in km?

Objective: Review kg and g

Study

We use grams (g) to measure the weight of light objects.

Example: The weight of a medium paper clip is about 1 g. We use kilograms (kg) to measure the weight of heavier objects. The weight of a baseball bat is about 1 kg

$$1 \text{ kg} = 1000 \text{ g}$$

Practice

1. Select and write the better estimate for:

- | | | |
|----------------------------------|----------|-----------|
| 1. The weight of a pair of shoes | a. 1 g | b. 1 kg |
| 2. The weight of a picture frame | a. 150 g | b. 150 kg |
| 3. The weight of a bicycle | a. 20 g | b. 20 kg |
| 4. The weight of a magazine | a. 200 g | b. 200 kg |

2. Complete. Write g or kg.

- a. The weight of a book is about 1 __
- b. The weight of a table tennis ball is about 5 __
- c. The weight of a magazine is about 200 __
- d. The weight of a bicycle is about 20 __

4. Write the missing numbers;

a.

5,612		5,614			5,617
-------	--	-------	--	--	-------

b.

41,216			41,219		41,221
--------	--	--	--------	--	--------

c.

212,199		212,201			
---------	--	---------	--	--	--

5. Write the place value of the circled digits

⑧ 6 1 5 , 1, ② 5 6 , ③ 1 2, 1 1 6 , 2 1 ⑥ 5 1 6

6. Write the numbers

- a. Four hundred and eleven thousands, two hundred and twelve
- b. Three hundred thousands, nine hundred and one.

7. Asad had 806,782 Afs. He went to Kabul and bought a child s bicycle for 652,863 Afs.. How much money does he have now?

$$\begin{array}{r} 806782 \\ - 652863 \\ \hline \end{array}$$

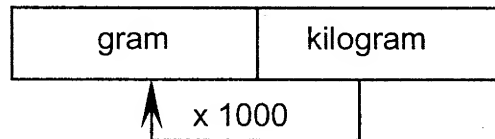
8. There are 560,847 children to be vaccinated in Afghanistan UNICEF can vaccinate only 308,553 children during the first phase. How many children will be left for the second phase?

9. Akbar bought a cow for 636,000 Afghanis. He spent 130,000 Afghanis on feeding the cow. He then sold the cow for 942,560 Afghanis. Find out his profit.

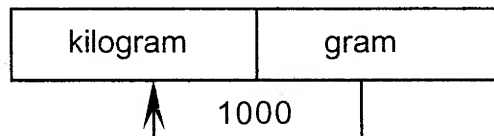
Objective: Change from kilograms to grams

Study

To change kilograms to grams, we multiply by 1,000 as shown in this figure:



To change grams to kilograms, we divide by 1,000 as shown in this figure.



Practice

1. Write the answers and the unit

a. 95 kgram $\times 1000 =$

c. 203 kg $\times 1.000 =$

b. 102 kg $\times 1.000 =$

d. 324 kg $\times 1.000 =$

2. Write the answers and the unit

a. 86000 $1000 =$

d. 312000 $1000 =$

b. 102000 $1000 =$

e. 318000 $1000 =$

c. 225000 $1000 =$

3. Find the answers and the unit

a. 18 kg $\times$ $= 18000$ g

d. 121 kg $\times 1000 =$

b. 208 kg $\times 1000 =$

e. 230 kg $\times$ $= 230000$ g

c. 130 kg $\times$ $= 130000$ g

4. Change to kg

a. 11000 g = kg

b. 209000 g = kg

c. 217000 g = kg

d. 303000 g = kg

5. Change the unit

18,000			=	18kg
124,000		1,000	=	
108,000			=	108kg
34,000		1,000	=	
208,000			=	208kg
14,000		1,000	=	

6. The weight of a bicycle is about 20kg change the weight to g.

7. The weight of a chair is 8,000g Calculate the weight in kg.

8. The weight of a table is about 25 kg. Change the weight to g.

9. The weight of 8 books is 17000 g. Calculate their weight in kg.

Objective: Review units of weight (kg, g).

Study

1) Zemarak weighs 52 kg. What is his weight in g?

$$52 \text{ kg} \times 1000 = 52000 \text{ g}$$

2) A dog weighs 10,000 g. What is the dog's weight in kg?

$$10000 \text{ gr} \div 1000 = 10 \text{ kg}$$

1. Change the unit

a. 5 kg = g

e. 5 kg = g

b. 82 kg = g

f. 3000 g = kg

c. 2000 gr = kg

g. 4 kg = g

d. 8000 gr = kg

2. Change the unit

	kg	g
a.	50	
b.		230000
c.	40	
d.	14	
e.		20000
f.	92	

	kg	g
g.		62000
h.	151	
i.		44000
j.	82	
k.		340000

3. Find the answers and write the unit

a. 55 kg $\times$ 1000 =

c. 25 kg $\times$ 1000 =

b. 22000 g $\div$ 1000 =

d. 420.000 gr $\div$ 1000 =

4. Parviz weighs 53 kg change his weight to g.

5. Maryam can carry up to 4,999 g How much is that in kg?

6. The weight of a box is about 20 kg. What is its weight in g?

7. The weight of a table is about 20,000 g. What is the weight of the table in kg?

Objective: Assess weight (kg, g).

1. Select and write the better estimate a or b for:

The weight of book a) 200 g b) 200 kg

The weight of a T.V a) 20 kg b) 20 g

2. Change the unit

	gr		kg
a.	180000	=	
b.		=	39
c.	7930000	=	
d.		=	129

3. The weight of a coat is 4 kg. Calculate the weight in g
4. The weight of a book is 2,000 g. Calculate the weight in kg

Objective: Introduce parts of a liter.

Study

Liter is a unit of measurement of capacity of liquids

1 liter = 1,000 milliliter

A medium sized jug holds about 1 liter (L) of water. An eyedrop holds about 1 milliliter (ml)



Liter



milliliter

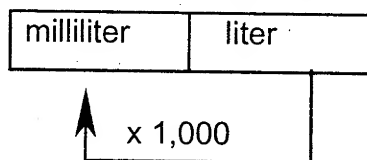
Practice

1. Write ml or L.
 - a. A washing machine uses about 50 _____ of water
 - b. A glass of milk holds about 100,000 _____
 - c. A swimming pool holds about 100,000 _____ of water
 - d. A container of oil holds about 5 _____ oil
 - e. A bottle in a bird cage holds about 40 _____ of water
 - f. There are about 2 _____ water in a jug.

Objective: Change between liters and milliliters.

Study

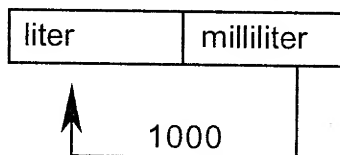
To change liters to milliliters we multiply by 1,000 as shown in this figure.



Example: change 3 liters to milliliters

$$3 \text{ L} \times 1,000 = 3,000 \text{ ml}$$

To change ml to L we divide by 1,000 as shown in the figure.



Example: Change 3,000 milliliters to liters.

$$3,000 \text{ ml} \div 1,000 = 3 \text{ L}$$

Practice

1. Change to ml.

a. $2 \text{ L} =$

d. $12 \text{ L} =$

b. $8 \text{ L} =$

e. $101 \text{ L} =$

c. $17 \text{ L} =$

f. $15 \text{ L} =$

2. Complete the table by changing the unit

ml		L		
4,000 ml				4L
25,000 ml		1000		L
13,000 ml				13 L
19,000 ml		1000		L
18,000 ml				18 L

3. Change to ml.

a. $240 \text{ L} \times 1,000 =$

c. $501 \text{ L} \times 1,000 =$

b. $101 \text{ L} \times 1,000 =$

d. $1.000 \text{ L} \times 1,000 =$

4. Complete the table by changing the unit

24,000 ml		1000	=	L
101,000 ml			=	101 L
19,000 ml		1000	=	L
212,000 ml			=	212 L
428,000 ml		1000	=	L

5. Change the units.

ml	L
68,000 ml	
	126 L
190,000 ml	
	121 L
22,000 ml	

6. A large can of paint holds about 4 liters. What is the capacity in milliliters?

7. A washing machine uses about 80 liters of water. How much is it in milliliters?

8. A bucket of water holds 8,000 milliliters. Change this to liters.

9. A small pool holds about 1,000 liters of water. What is the capacity of the pool in milliliters?

10. A jug of juice holds 2,000 milliliters. Change this to liters

Objective : Review measurement of capacity.

Study

A container holds 20 liters of water. Change to milliliters.

$$20 \text{ L} = 20 \times 1,000 = 2,000 \text{ ml.}$$

A bottle of water holds 2,000 milliliters of water. Change it to liters.

$$2,000 \text{ ml} = 2,000 \div 1,000 = 2 \text{ L}$$

Practice

1. Change to ml.

a. $3 \text{ L} = \quad \text{ml}$

b. $6 \text{ L} = \quad \text{ml}$

c. $7 \text{ L} = \quad \text{ml}$

d. $9 \text{ L} = \quad \text{ml}$

2. Find the missing numbers by changing the unit ,

a. $2 \text{ L} \times \quad = \quad \text{ml}$

b. $12,000 \text{ ml} = \quad \text{L}$

c. $27 \text{ L} \times \quad = \quad \text{ml}$

d. $530,000 = \quad \text{L}$

3. Complete the table by changing the units.

L		ml
	=	4,000
27	=	
	=	72,000
198	=	

4. A tanker of oil holds 700 liters. Change this to milliliters

5. A container of milk holds 25,000 milliliters. Change this to liters

Objective: Assess measurement of capacity.

1. Change the units.

a. 1 L = ml

c. 5L = ml

b. 3,000ml = L

d. 8,000 ml = L

2. Change the units.

	L	ml
a.	50	
b.		102,000
c.	28	
d.		32,000
e.	92	

	L	ml
f.		190,000
g.	49	
h.		98,000
i.	69	
j.		51,000

3. Write the number and the unit

a. 80,000 ml 1,000 =

f. 809,000 ml = 809 L

b. 142 L x 1,000 = 142,000 ml

g. 202,000 ml 1,000 =

c. 54 L x 1,000 =

h. 109,000 ml = 109 L

d. 210,000ml = 210 L

i. 29 L x 1,000 =

e. 205,000 ml 1,000 =

k. 35 L x = 35,000 ml

3. A tanker of oil holds 9,000 liters . Change this to milliliters.

4. A container of milk holds 28,000 milliliters. Change this to liters.

Objective : Introduce the Lunar Calendar.

Study

In Islamic countries the Lunar calendar is in use. There are twelve months in a Lunar year.

Muharam-ul-Haram, Safar-ul-Muzafar, Rabi-ul-Awal, Rabi-ul-Akhir, Jamadi-ul-Awal, Jamadi-ul-Akhir, Rajab-ul-Murajab, Shaban-ul-Muazam, Ramazan-ul-Mubarak, Shawal-ul-Mukaram, Zilqadat-ul-Haram, Zilhajat-ul-Haram.

The lunar year has 354 days.

Practice

1. Answer the following questions.

How many months are in a lunar year? _____

How many days are in a lunar year? _____

2. Write the month that comes after.

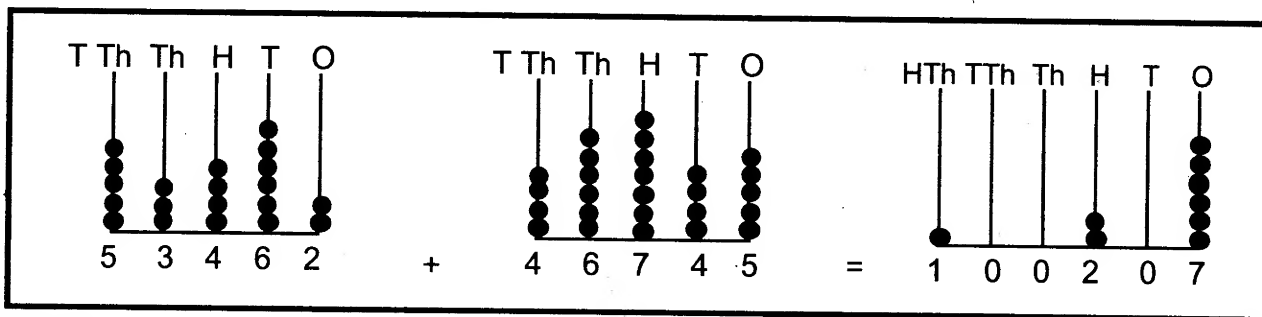
- a. Muharam-ul-Haram
- b. Rabi-ul-Awal
- c. Jumadi-ul-Akhir
- d. Ramazan-ul-Mubarak

3. Write the month that comes before.

- a. Ramazan-ul-Mubarak
- b. Jamadi-ul-Awal
- c. Rabi-ul-Awal
- d. Zilhajat-ul-Haram

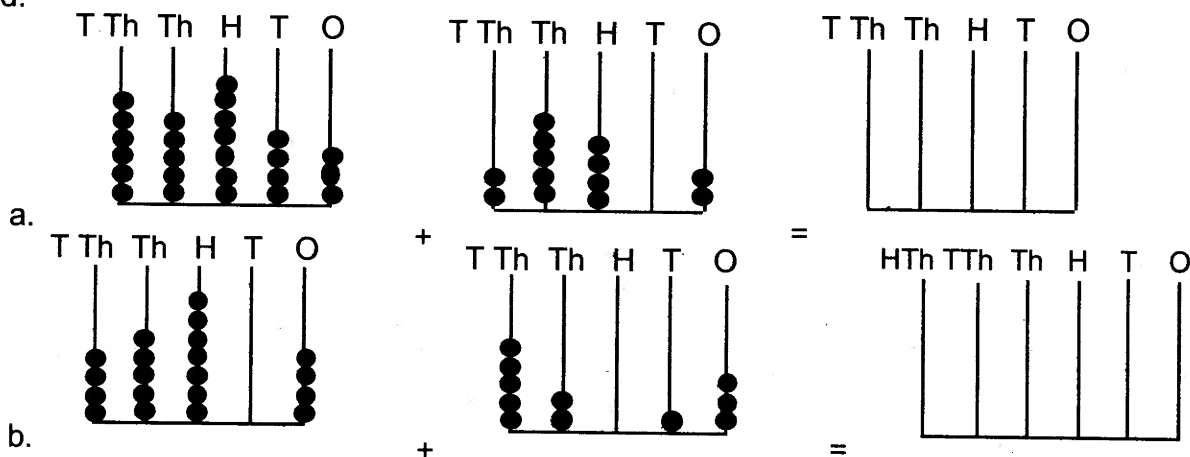
Objective: Review addition of 5 and 6 digit numbers with carrying.

Study



Practice

1. Add:



2. Add the following
Example

	100 Thousands	10 Thousands	Thousands	Hundreds	Tens	Ones
	6	0	5	6	8	3
+		4	0	5	0	9
	6	4	6	1	9	2

a.
$$\begin{array}{|c|c|c|c|c|c|} \hline 5 & 6 & 0 & 8 & 2 & 5 \\ \hline + & 4 & 0 & 2 & 3 & 9 \\ \hline \end{array}$$

b.
$$\begin{array}{|c|c|c|c|c|c|} \hline 6 & 3 & 0 & 7 & 0 & 5 \\ \hline + & 3 & 0 & 5 & 4 & 9 \\ \hline \end{array}$$

c.
$$\begin{array}{|c|c|c|c|c|c|} \hline 7 & 0 & 3 & 0 & 5 & 1 \\ \hline + & 2 & 3 & 7 & 4 & 0 \\ \hline \end{array}$$

3. Ahmad bought a cow for 605,683Afs Afs. He also bought a chicken for his son worth 40,509 Afs. How much money did he spend?

Objective: To introduce Seasons and temperature

Study

There are four seasons in a year. Spring, summer, fall and winter. We measure temperature in degrees celsius ($^{\circ}\text{C}$) using a thermometer. This thermometer is marked off in intervals of ten degrees labeled 10, 20, 30 and so on to 100°C . We call the point at which water freezes 0°C (zero degrees Celsius).

The temperature in Spring and Fall is warm. Summer temperature is very hot. Winter temperature is cold.

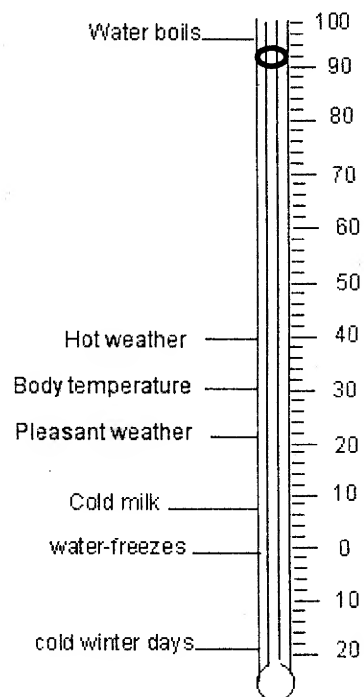
Key

Cold: less than 10°C

Warm : 10°C to 21°C

Hot : 21°C to 35°C

Very hot : over 35°C



Practice

Choose the most likely temperature a, b, or c for the following.

- Water freezing a. 30°C b. 20°C c. 0°C
- Planting a garden a. 25°C b. 0°C c. 5°C
- Trees shedding their leaves a. 25°C b. 5°C c. 40°C
- Wearing a winter coat a. 75°C b. 1°C c. 28°C
- Ice-skating on a pond a. 20°C b. 40°C c. 0°C
- Water boiling a. 85°C b. 100°C c. 90°C
- The temperature at 12:00 am was 40°C . At 3:00 pm. It rained and the temperature dropped 15 degrees. What was the temperature at 3:00 pm?
- The temperature at 6:00 am was 10°C . It rose 20 degrees by noon. It rose another 12 degrees by 2 pm. It dropped 15 degrees by 8 pm. What was the temperature at 8 pm?

Objective: To review days of the week.

Study

One week has 7 days. The days of the week are :
Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday

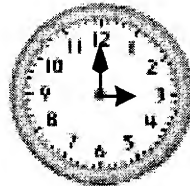
1. How many days are in one week?
2. Today is Tuesday. What will tomorrow be ?
3. Today is Tuesday. What was yesterday?
4. Write the day that comes after.
 - a. Monday b. Wednesday c. Sunday d. Thursday
 - e. Saturday f. Tuesday g. Friday
5. Write the days that come before.
 - a. Monday b. Thursday c. Saturday d. Tuesday
 - e. Wednesday f. Friday g. Sunday
6. Write the day that comes two days after.
 - a. Wednesday b. Monday c. Friday d. Sunday
 - e. Saturday f. Tuesday g. Thursday
7. Mariam s mother bought a pair of shoes for her two days ago. Today is Friday. What day did she buy the shoes?
8. We are going to Logar in two days time. Today is Thursday. On what day will we go?

Objective : Review time.

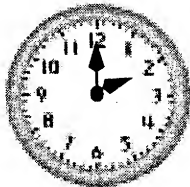
Study

A watch is used to measure the time

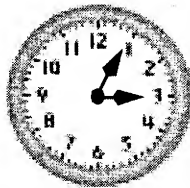
The short hand tells the hours
The long hand tells the minutes
One hour has 60 minutes



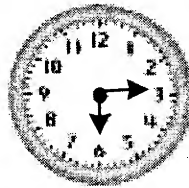
Example:



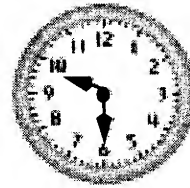
2:00



3:05



6:15

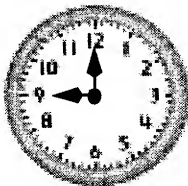


9:30

Practice

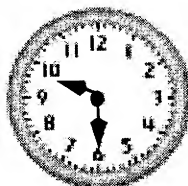
1. Write the time. Follow the example

a.

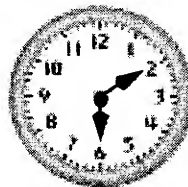


9:30

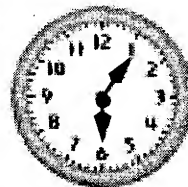
b.



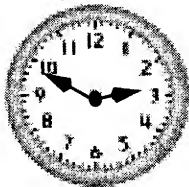
c.



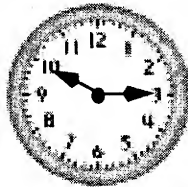
d.



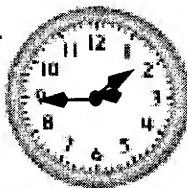
e.



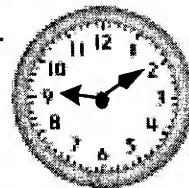
f.



g.

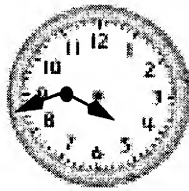


h.



2. This is what Shakila plans to do. Write the time when Shakila:

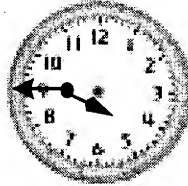
a. Feeds the chickens



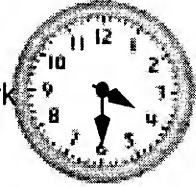
d. Gets water



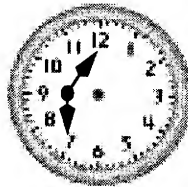
b. Cleans her room



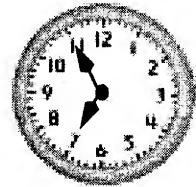
e. Does her homework



c. Goes to lunch



f. Has her dinner



3. Write the time

a. 1 hour after 9:30

b. 3 hours after 5:20

c. 4 hours after 6:15

d. 6 hours after 6:05

4. Nangyali had breakfast at 7:10 am. He got to school one hour later. What time did he get to school?

5. Rabia started painting at 3:40 pm she finished two hours later. What time did she finish?

6. Fatima went to the store at 2:50 pm. She got home one hour later. What time did she get home?

Objective: Revise time.

Study

Wagma was born in 1415 in Jamadi-ul-Awal on Sunday at 8:45

Wagma s birthday	Year	Month	Day	Time
	1415	Jamadi-ul-Awal	Sunday	8:45

We measure longer periods of time by years.

Medium length periods of time by months

Shorter periods of time in days .

Very short periods of time by hours and minutes.

Practice

1. Answer the questions.

- How many days in a year?
- How many seasons in a year?
- How many months in a season?
- How many days in a week?
- How many hours in a day?

2. Write the days of the week in order.

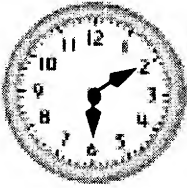
	Monday	Tuesday			Friday	
--	--------	---------	--	--	--------	--

3. Write the months of the year in order.

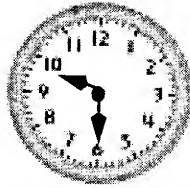
Moharam-ul-Haram		Rabi-ul-Awal			Jamadi-ul-Akhir
Rabi-ul-Morajab			Shawal-ul-Mokaram	Zulqadatul-Haram	

4. Write the time.

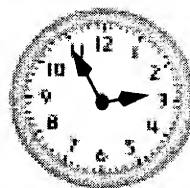
a.



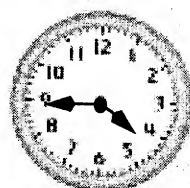
b.



c.



d.



5. Choose the most likely temperature a,b,or c for:

a. body temperature

a. 80°C

b. 37°C

c. 1°C

b. pleasant weather

a. 20°C

b. 40°C

c. 5°C

c. cold winter days

a. 0°C

b. 34°C

c. 25°C

d. hot weather

a. 40°C

b. 25°C

c. 32°C

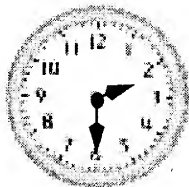
6. Nabi started studying at 8:45 pm. He studied for two hours. What time did he finish?

7. The temperature at 6 am was 25°C . It rose 10°C by 10:00 am. At 12 am it rained and the temperature dropped 8°C . What was the temperature at 12 am?

Objective: Assess time

1. How many days are in a lunar year?
2. Write the month before and after.
 - a. Safar-ul-Muzafzr
 - b. Zulqadat-ul-Haram
 - c. Shawal-ul-Mukaram
 - d. Ail Habit-ale-Haram.
3. Choose the most likely temperature a,b, or c when:
 1. Warm clothes are needed a. 5 °C b. 25 °C c. 35 °C
 2. Light summer clothes are needed a. 70 °C b. 40 °C c. 10 °C
 3. Flowers blossom a. 0 °C b. 20 °C c. 40 °C
 4. Water boils a. 120 °C b. 100 °C c. 0 °C
 5. Trees lose their leaves a. 5 °C b. 15 °C c. 35 °C
 6. Water becomes ice a. 100 °C b. 25 °C c. 0 °C
4. Write the days before and after.
 - a. Monday
 - b. Thursday
 - c. Saturday
 - d. Tuesday
5. Write the time.

a.



b.



Objective: Introduce finding the side of a square.

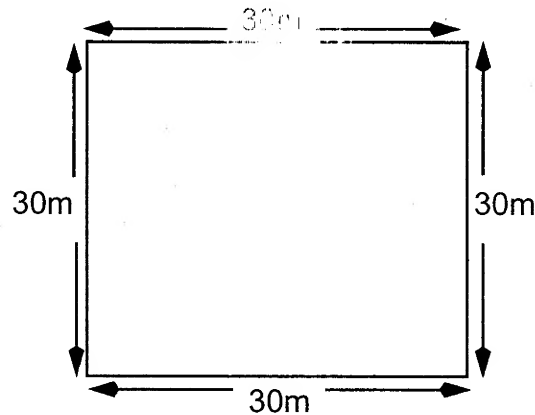
Study

The perimeter of a shape is the distance around it.

Example:

Find the perimeter of a square garden.

When one of the sides is 30 meters long



Perimeter of square = $30\text{ m} + 30\text{m} + 30\text{m} + 30\text{m} = 120\text{ m}$

or $30\text{m} \times 4 = 120\text{ m}$

Perimeter of square = side $\times$ 4

To find the side of a square, we divide perimeter by 4

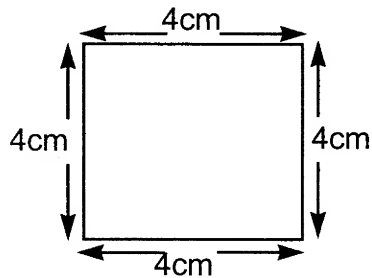
Perimeter of square = 28 cm

One side of square = $28\text{ cm} \div 4 = 7\text{ cm}$

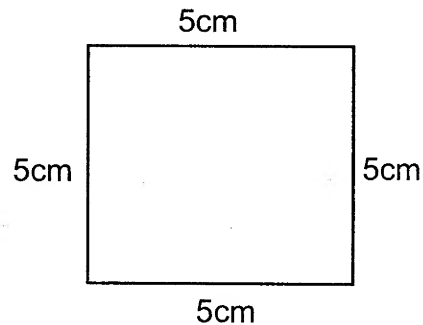
Practice

1. Find the perimeters

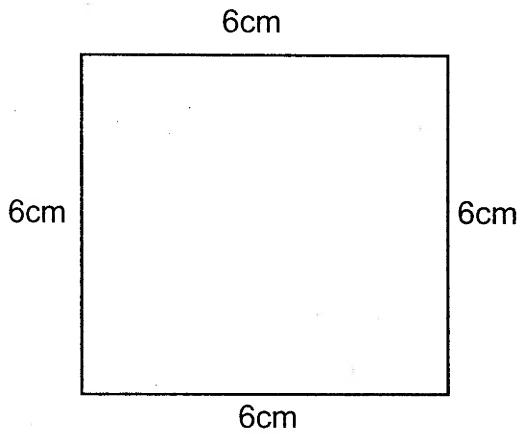
a.



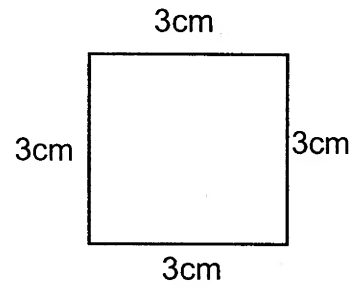
b.



c.



d.



2. Complete the table.

Side of square	Perimeter of square
4 cm	
	2 cm
8 cm	
	24 cm
5 cm	

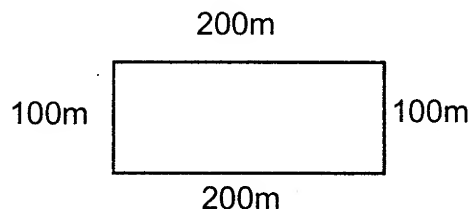
3. What is the perimeter of a square if one side is 35 m?
4. Find the perimeter of a square that has a side of 50 cm?
5. Find the side of the square that has a perimeter of 240 m?

Objective: Introduce finding the side of a rectangle

Study

The perimeter of a shape is the distance around it.

Example 1 Rahim wants to fence his rectangular garden that is 100 m wide and 200 m long. How many meters of fence does he need?



Perimeter = side + side + side + side

Perimeter = 100m + 200m + 100m + 200m = 600 m

Perimeter = 2 width + 2 length

or 2 (width + length)

$\frac{1}{2}$ of perimeter = width + length

Width = $\frac{1}{2}$ perimeter - length

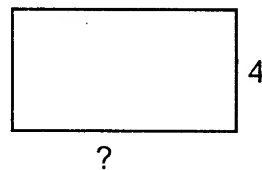
Length = $\frac{1}{2}$ perimeter - width

Example 2: The perimeter of a carpet is 24 m. The width is 4m. Find the length of the carpet?

Length = $\frac{1}{2}$ perimeter - width

$$\text{Length} = \frac{24}{2} - 4$$

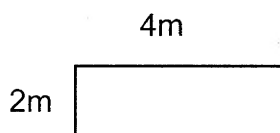
$$\text{Length} = 12 - 4 = 8 \text{ m}$$



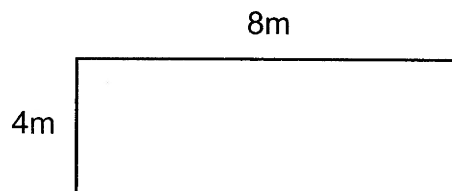
Practice

1. Find the perimeter of following rectangles

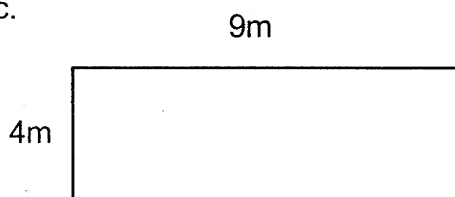
a.



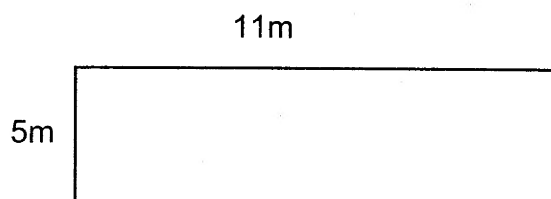
b.



c.



d.



Objective: Review subtraction of 5 and 6 digit numbers with borrowing.

Study

When we subtract large numbers, we place the ones, the tens, the hundreds, the thousands, and the ten thousands under each other. First we regroup some numbers and then subtract.

For example:

$$\begin{array}{r} 82134 \\ - 63626 \\ \hline \end{array}$$

Regroup the tens

$$\begin{array}{r} 214 \\ 821\cancel{3}\cancel{4} \\ - 63626 \\ \hline \end{array}$$

Subtract the ones

$$\begin{array}{r} 214 \\ 821\cancel{3}\cancel{4} \\ - 63626 \\ \hline 8 \end{array}$$

Regroup the hundreds and thousands

$$\begin{array}{r} 7111214 \\ 821\cancel{3}\cancel{4} \\ - 63626 \\ \hline 8 \end{array}$$

Subtract the tens, hundreds, and thousands

$$\begin{array}{r} 7111214 \\ \cancel{8}\cancel{2}\cancel{1}\cancel{3}\cancel{4} \\ - 63626 \\ \hline 18508 \end{array}$$

Practice

1. Copy and find the missing numbers.

659,043	—		=	325,793
—				—
				214,562
=				=
3,029	=		—	

2. Find the measurements.

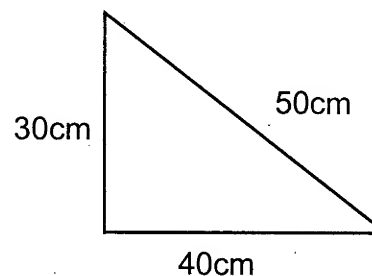
Perimeter of rectangle	Width	Length
30 m		8 m
22 m	3 m	
		12 m
50 m	10 m	
	20 m	30 m

3. Shabnam has a carpet. The width of the carpet is 4 m and the length is 8 m. She wants to put a border around it. How many meters does she need?
4. Parwin wants to frame a picture . The perimeter of the picture is 48 cm. She needs a piece of wood 16 cm long for the length of the picture. How long should she cut the other piece for the width of the picture?

Objective: Introduce side and perimeter of a triangle.

Study

Example 1: Habiba has an apple garden that is triangular in shape. She wants to build a fence around it. How many meters of barbed wire will be needed?



The perimeter of the triangle = $S + S + S = 30\text{cm} + 40\text{cm} + 50\text{cm} = 120\text{cm}$

To find one side of a triangle we need to know the perimeter and two other sides.

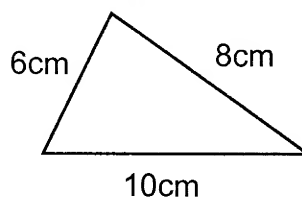
Example 2: The perimeter of a triangular flower bed is 24m. Two of the sides are respectively 6m and 8m. What is the length of the third side?

Side = perimeter - (Side + Side)

Side = $24 - (6 + 8)$

Side = $24 - 14 = 10$

Side 10m



Practice

1. Find the measurements.

Triangle			
Side 1	Side 2	Side 3	perimeter
5cm	7cm	6cm	
9cm		8cm	24cm
	6cm	4cm	15cm
8cm	4cm		17cm
3cm	5cm	6cm	
5cm	5cm		15cm
6cm	4cm	7cm	
	4cm	4cm	12cm
7cm	9cm	5cm	
4cm		5cm	17cm

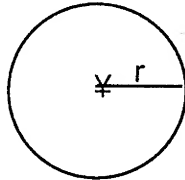
2. What is the perimeter of a triangular bed of roses if one side is 18m and the other two sides together are 40m.
3. Mariam wants to plant flowers around her bed of roses which has 3 sides each is 5m long. What is the length of the perimeter that she has to plant?
4. The perimeter of a triangular bed of flowers is 18m. Two sides together are 11m long. What is the length of the third side?

Objective: Introduce perimeter of a circle.

Study

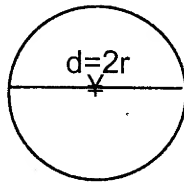
The Radius (r)

The radius of a circle is the distance from the center of a circle to a point on its perimeter.



Diameter (d)

The diameter of a circle is a distance across the circle through its center.



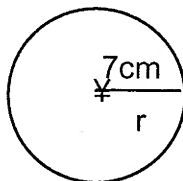
$$d = 2 \times r$$

π is a constant number equal to $\frac{22}{7}$ used in measuring perimeter and area of circle.

Perimeter

Perimeter of a circle is the distance around the circle. The perimeter of a circle is: $d \times \pi$

Example: Find the perimeter of the following circle.



$$\text{diameter} = 2 \times 7 = 14 \text{ cm}$$

$$\text{Perimeter} = d \times \pi$$

$$\text{Perimeter} = 14 \times \frac{22}{7} = \frac{14 \times 22}{7} = 44 \text{ cm}$$

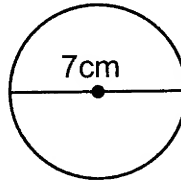
The perimeter = 44 cm

Practice

1. Complete the measurements

radius	diameter	perimeter
	14 m	44 m
14 m	28 m	
21 m		132 m
28 m	56 m	
	70 m	220 m

2. Nassir has a circular bed of flowers in his garden. The diameter is 7 m. He wants to build a fence around it. How many meters of barbed wire will he need?



3. Ahmad bought a piece of land, which is circular in shape. The radius is 56 m. What is the perimeter of land?

Objective: Review sides and perimeters.

Study

The perimeter of a shape is the distance around it.

The perimeter of a square = side $\times$ 4

The perimeter of a rectangle = 2 (length + width)

The perimeter of a triangle = side + side + side

The perimeter of a circle = $d \times \frac{22}{7}$

Practice

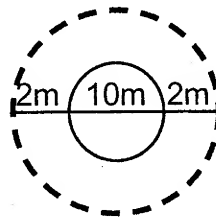
1. Complete the measurements.

side 1	side 2	side 3	side 4	Perimeter
4 cm				16 cm
5 cm	7 cm			21 cm
2 cm	5 cm			14 cm
8 cm				64 cm
6 cm	5 cm	5 cm		
9 cm				23 cm

2. Complete the measurements.

R	D	Perimeter
7cm		44cm
21cm	42cm	
	70cm	220cm

3. Najeeba has a flower field which is rectangular in shape. The width is 70m and the length is 100m. What is the perimeter of the flower field?
4. Parwin wants to fence her flower bed. The flower bed has 3 equal sides. The perimeter of the flower bed is 24 m. Find one side of the flower bed?
5. Yaqub has a pool. The diameter of the pool is 10 m. He wants to plant apple trees around it up to 2m beyond the pool. What is the length of the perineter around the trees?



Objective: Assess sides and perimeters.

1. Complete the measurement.

side 1	side 2	side 3	side 4	Perimeter
9 cm				
4 cm		7 cm		16 cm
2 cm	5 cm			
8 cm		5 cm		18 cm
		5 cm		
		4 cm	8 cm	

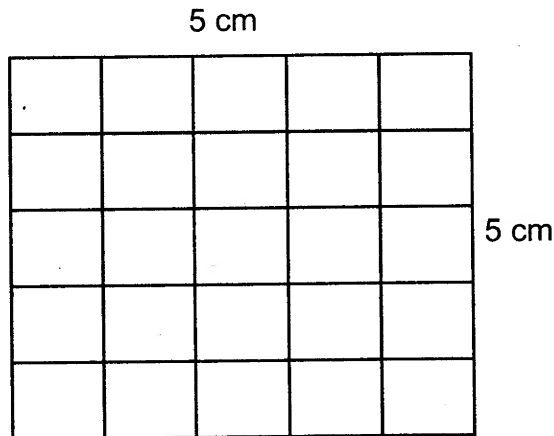
- Fatima wants to make a chicken coop 3 m wide and 5m long. Find the perimeter of her chicken coop.
- Hameeda's hand kerchief is square in shape. One side of her hand kerchief is 80 cm. What is the perimeter of the hand kerchief?
- The perimeter of triangular bed of flowers is 14 m. Two sides together are 8 m long. What is the length of the third side?
- Rabia wants to put a border around her round table cloth which has a 56 cm radius. Find the length of the border?

Objective : Introduce area of a square

Study

We can find the area of a square by counting the number of squares inside it or we can multiply its sides. The area is expressed in square units.

Example:



There are 25 squares in this figure. If each is 1 cm^2 then the area of the figure is 25 cm^2

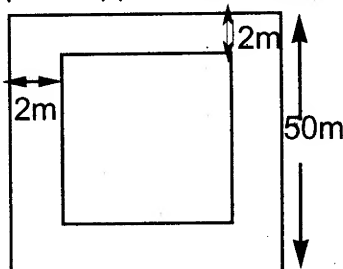
The sides of the figure are 5cm long. If we multiply the sides (side x side) $5 \times 5 = 25$
The area of the figure is 25 cm^2

Practice

- Complete the measurement.

side	x	side	area of square
4 cm	x		16 cm^2
6 cm	x	6 cm	
8 cm	x		64 cm^2
7 cm	x	7 cm	

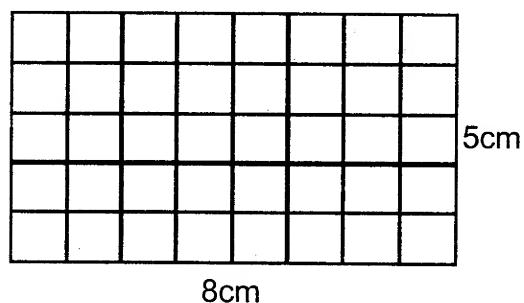
- Find the area of a square that has a side 4 cm?
- Ahmad has a square shaped flower garden. The sides are 50 m. He wants to leave 2m space on each side and plant apple trees. What would be the area of flower garden?



Objective: Introduce area of a rectangle

Study

To find the area of a rectangle we multiply the width by the length.
The area of the figure is expressed in square units.



$$\text{Area of rectangle} = \text{length} \times \text{width} = 8 \text{ cm} \times 5 \text{ cm} = 40 \text{ cm}^2$$

To find the width or the length of a rectangle or square. We divide the area by the length or width

$$\text{Area} = 40 \text{ cm}^2 \quad \text{length} = 8 \text{ cm}$$

$$\text{Width} = 40 \div 8 = 5 \quad \text{Width} = 5 \text{ cm}$$

Practice

1. Complete the measurements.

Area of rectangle	Length		Width
	6 cm	x	6 cm
	6 cm	x	
42 cm ²		x	6 cm
	9 cm	x	
32 cm ²		x	4 cm
	6 cm	x	

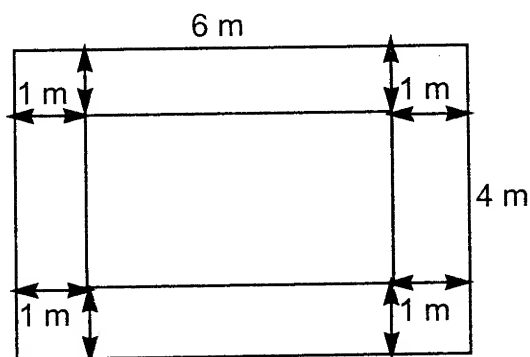
2. Find the area of a rectangle. The length is 6 cm and the width is 3 cm

3. Find the area of a room whose length is 12 m and width 4 m

2. The UN has prepared the following repatriation plan for Afghan refugees in NWFP/ Pakistan. Fill in the missing numbers of refugees.

Year	Total Ref	Repatriating	Remaining
2000	989,823	213,219	
2001	776,604	110,215	
2002	666,389	100,411	
2003	565,978	114,892	
2004	451,086	241,043	
2005	210,043	100,043	

4. Khwaga wants to buy a piece of carpet for her room. The length of the room is 6 m and the width is 4 m. She wants to leave 1 meter space on each side and cover the remaining part of the room. What would be the area of the carpet that Khwaga needs to buy?



Objective: Review area of square and rectangle.

Study

Area of a rectangle = length x width

To find the width of a rectangle we divide the area by the length

To find the length of a rectangle we divide the area by the width

Example

$$\text{Area} = 168\text{m}^2 \quad \text{length} = 14\text{m}$$

$$\text{Width} = 168\text{m}^2 \div 14\text{m} = 12\text{m}$$

Area of a square = side x side

To find the side of a square, we think of a number multiplied by itself that is equal to the area

Example

$$\text{Area} = 16\text{m}^2 \quad \text{side} = 4\text{m}$$

$$\text{Area } 9 = \text{m}^2 \quad \text{side} = 3\text{m}$$

$$\text{Area} = 25\text{m}^2 \quad \text{side} = 5\text{m}$$

$$\text{Area } 36 = \text{m}^2 \quad \text{side} = 6\text{m}$$

Practice

1. Find the length or width

area	length	width
27m^2	90m	
24cm^2		4cm
72cm^2		6cm
88m^2	11m	

2. Complete the measurements.

area	side	side
	22m	22m
300cm^2	15cm	
324cm^2		18cm
1120m^2	32m	
	41cm	42cm
256m^2		16m

3. Find the area of a carpet. The length is 4 m and width is 3m.

3. Wali has a field 88 m long and 70 m wide. Find the area of Wali s field.

3. Nazir has a square garden. Each side of the garden is 77 m. Find the area of Nazir s garden?

Objective: Assess area of square and rectangle.

1. Complete the measurements.

area	side	side
16 cm^2	4 cm	
	6 m	6 m
64 cm^2		8 cm
54 cm^2	9 cm	
48 m^2		4 m
63 cm^2	9 cm	
	8 m	3 m
120 cm^2		12 cm
	20 m	25 m
325 cm^2	15 cm	
96 cm^2		12 cm

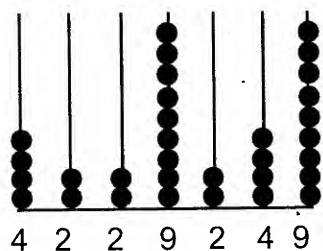
2. Nasir has a square room. Each side of the room is 4m. Find the area of Nasir's room?
3. Khwaga built a square chicken coop with sides of 7m. Find the area of the coop?
4. Nazia has a garden 92m long and 81m wide. Find the area of Nazia's garden?

Objective: Read and write numbers up to millions

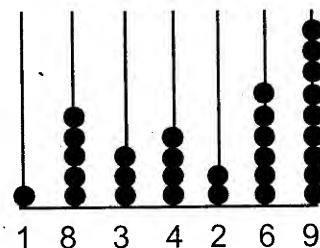
Study

When we talk about the population of cities, states or countries, we use large numbers. For example: The population of Turkmenistan is 4,229,249. Four million, two hundred and twenty nine thousand, two hundred and forty nine. The population of Kuwait is 1,834,269. One million, eight hundred thirty four thousands two hundred and sixty nine. The population of Oman is 2,283,324. Two million, two hundred and eighty three thousand, three hundred and twenty four

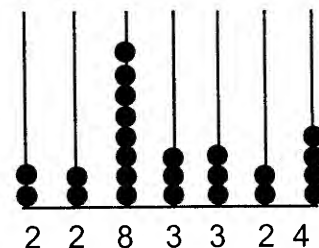
Turkmenistan



Kuwait



Oman

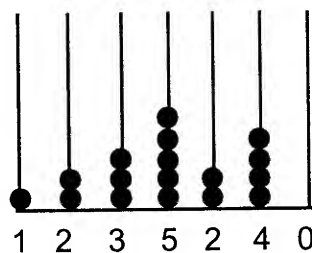


We can show these in a table

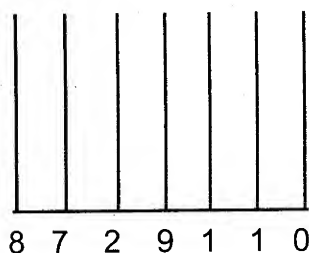
	100 M	10 M	M	100	10	T	H	T	O
The population of Turkmenistan			4	2	2	9	2	4	9
The population of Kuwait			1	8	3	4	2	6	9
The population of Oman			2	2	8	3	3	2	4

Practice

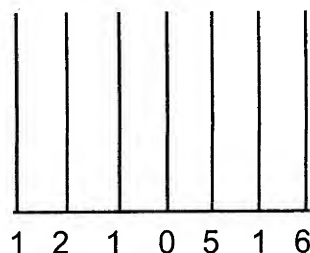
1. Draw the abacus and show the numbers.
Follow the example



a.



b.



2. Write the numbers in the table

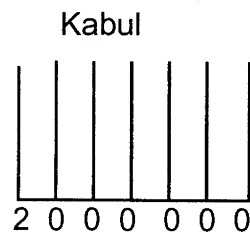
Follow the example

	100 M	10 M	M	100 Th	10 Th	Th	H	T	O
1,239,822			1	2	3	9	8	2	2
9,230,870									
8,978,211									
2,312,101									
1,001,978									

3. Look at the table

2,312,516	3,630,100	9,999,210	3,441,100	6,139,211	8,131,532
4,511,214	2,312,500	1,345,191	2,181,516	3,136,136	2,181,200
2,101,900	5,110,440	9,231,500	4,394,111	7,931,200	1,539,194
3,445,200	2,187,100	1,999,221	4,238,200	2,900,100	4,344,287

- Write the numbers with 2 in the one million place
 - Write the number with 3 in ten thousand place
4. The population of Kabul is 2,000,000. Draw the abacus to show this.



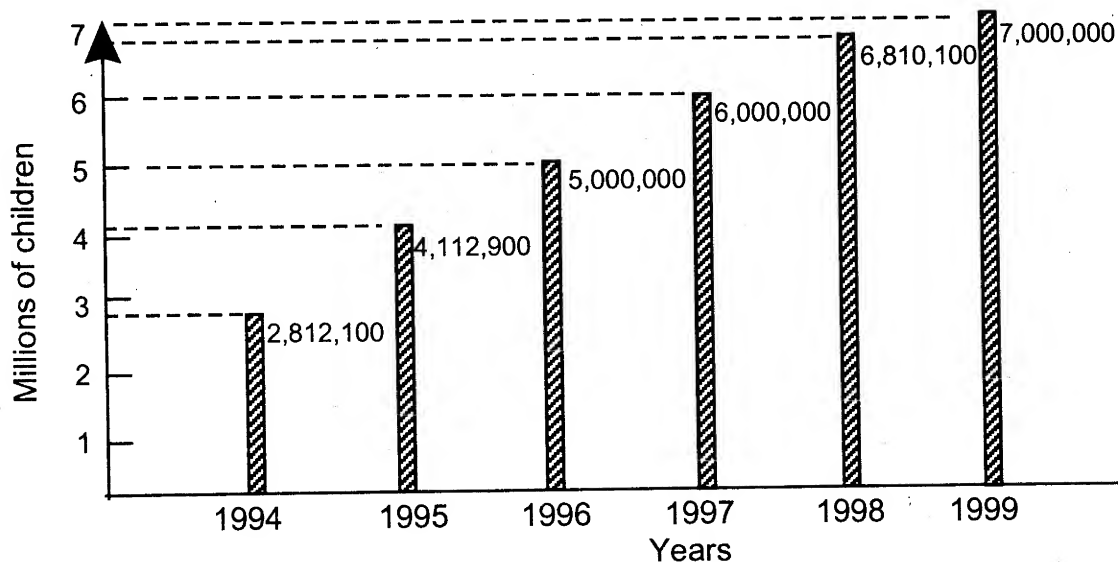
5. Write in standard form
- Two million three hundred thousands
 - Nine million one hundred and twenty one thousands
6. Compare the numbers with $<$ and $>$
Follow the example: $2,312,500 < 3,212,300$

- 4,111,200 4,211,200
- 3,110,100 3,110,100

Objective: Add and subtract using graphs to indicate millions.

Study

To indicate data, we use graphs. For example vaccination of children in Afghanistan is shown in the graph for 1994 to 1999



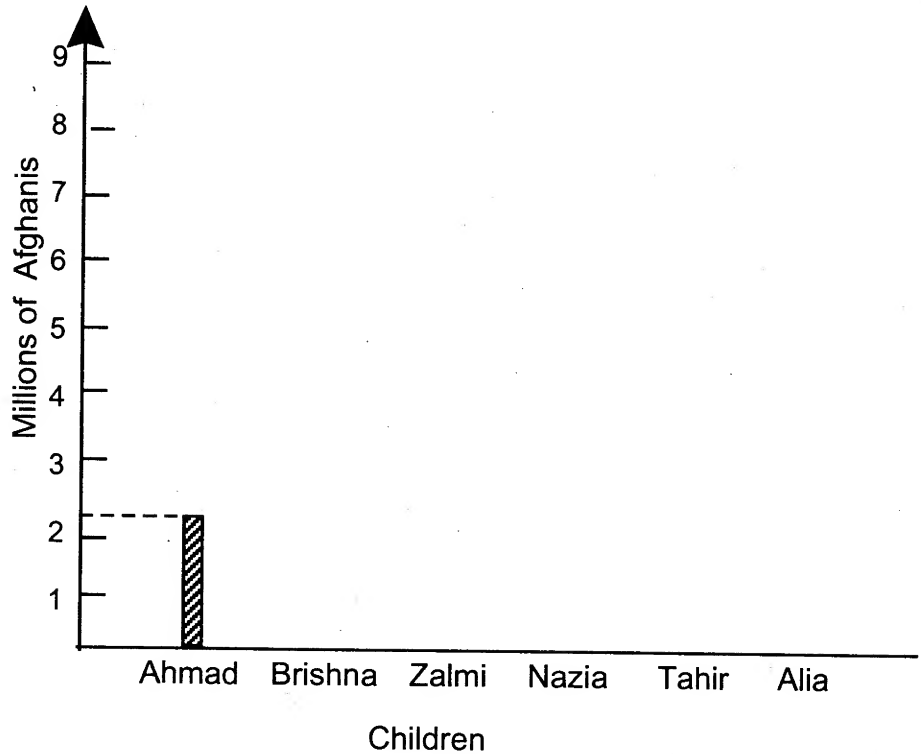
Practice

1. Solve.

- How many children were vaccinated in both 1994 and 1996?
- How many more children were vaccinated in 1999 than in 1994?
- How many children were vaccinated in both 1998 and 1999?
- What is the difference between these and those who were vaccinated in 1996?
- Add all the number of children vaccinated in the years 1997, 1998 and 1999.

2. Draw the graph and show the following data. Follow the example

Name	Afghanis
Ahmad	2321000
Brishna	8120000
Zalmi	4000000
Nazia	8.301.000
Tahir	1000000
Alia	6000000

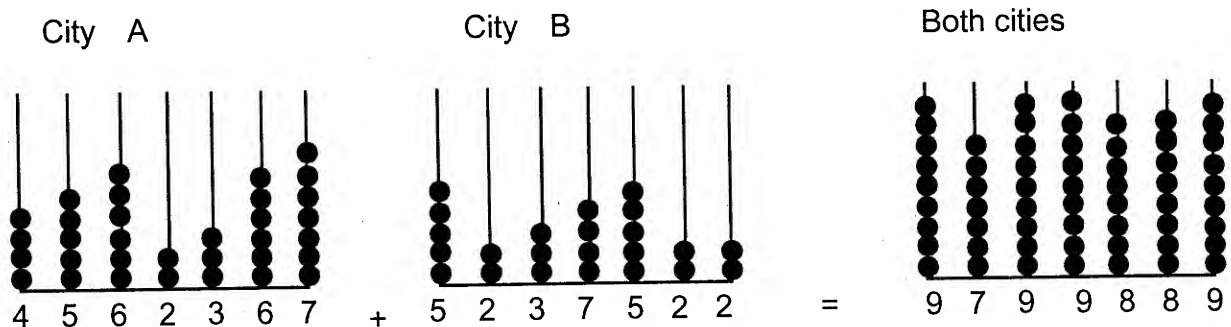


- How many Afghanis do Ahmad and Brishna have?
- Who has the least amount of Afghanis? Write that amount.
- Who has the largest amount of Afghanis? Write it.
- How much money do the girls have?
- How much money do the boys have?
- What is the difference in the amount of money the boys have as compared to the amount of money that the girls have?
- What is the difference between the largest and the smallest amount of money?

Objective: Add Millions**Study**

Some times we show larger numbers like the population of cities on an abacus. We can also add large numbers in a table.

For example: If the population of city A is 4,562,367 and the population of City B is 5,237,522, we can calculate the population of both cities as follows:

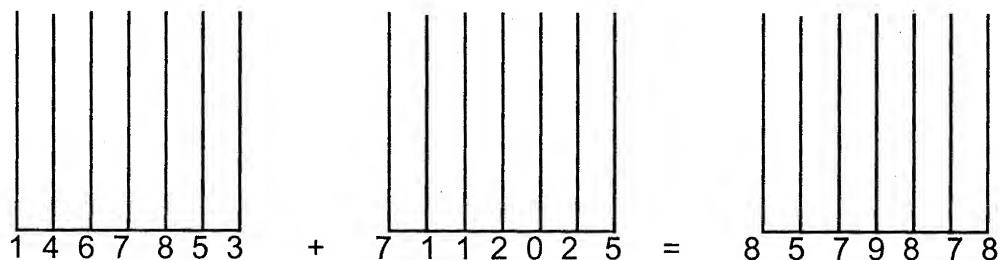


We can also add those numbers and show them in a table as follows:

	Millions			Thousands			Ones		
City	100	10		100	10				
	M	M	M	Th	Th	Th	H	T	O
A			4	5	6	2	3	6	7
B			5	2	3	7	5	2	2
Total			9	7	9	9	8	8	9

Practice

- The Education Department of Kabul distributed a total of 1,467,853 notebooks to students in Sarobi and 7,112,025 notebooks to students in Paghman. Find out the total number of distributed notebooks to students in both Districts?

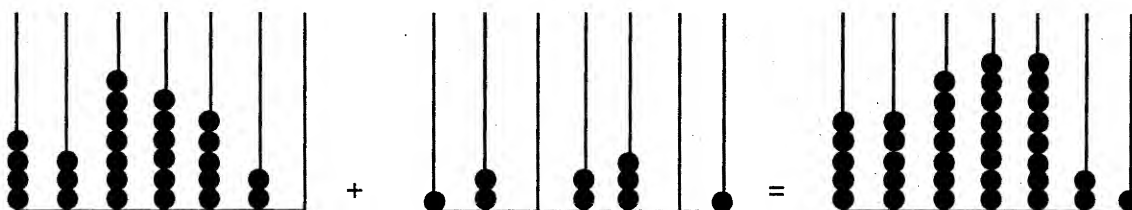


	100	10		100	10				
	M	M	M	Th	Th	Th	H	T	O
Sarobi			1	4	6	7	8	5	3
Paghman			7	1	1	2	0	2	5
Total									

- Afghanistan imported 1,345,670 tons of wheat from Pakistan in 1978 and imported 8,454,126 tons of wheat in 1979. What was the total amount of wheat that Afghanistan imported from Pakistan during both years?

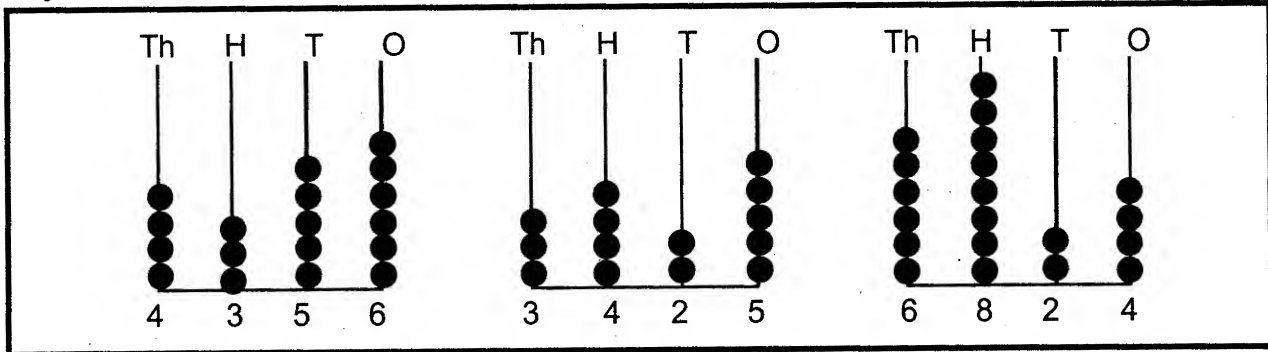
Years	100	10		100	10				
	M	M	M	Th	Th	Th	H	T	O
1978			1	3	4	5	6	7	0
1979			8	4	5	4	1	2	6
Total									

- The population of South - Western Region of Afghanistan was 4,376,520 in 1978. 1,202,301 people moved from Central Afghanistan to this area. What was the total population of South - Western Afghanistan after that move?



Objective: Review place value up to 1000 (thousand)

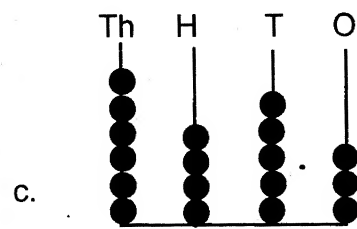
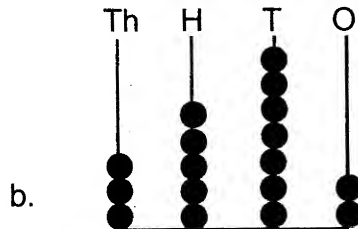
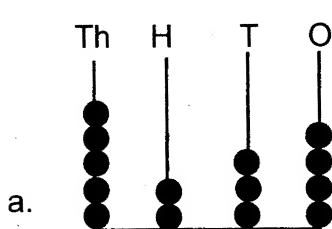
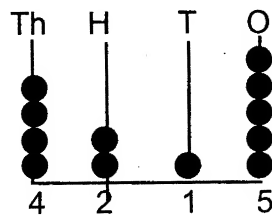
Study



Practice

1. Write the numbers shown on the abacus.

Example:



2. Follow the example

Thousands			Ones			
Hundred Thousands	Ten Thousands	Thousands	Hundred	Tens	Ones	
		8	2	1	5	8, 2 1 5
						9, 4 7 6
						6, 9 3 8
						8, 5 4 3
						7, 0 0 5
						9, 6 0 2

3. Write the words of the following numbers.

Example: 8,569 eight thousand five hundred and sixty nine

a. 9,865

c. 6,230

b. 8,078

d. 7,809

Objectives: Subtract large numbers with zeros.

Study

When we subtract large numbers that have zeros, we must subtract them step by step. Look at the example

Ahmad had 4,305,500 Afghanis. He paid 2,228,375 Afghanis for a new house. How much money is left with Ahmad?

Total money = 4,305,500 Afghanis

Price of new house = 2,228,375 Afghanis

We subtract step by step:

$$\begin{array}{r} 9 \\ 4305500 \\ - 2228375 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 9 \\ 4305500 \\ - 2228375 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 4 \\ 4305500 \\ - 2228375 \\ \hline 125 \end{array}$$

$$\begin{array}{r} 9 \\ 21015 \\ 4305500 \\ - 2228375 \\ \hline 7125 \end{array}$$

$$\begin{array}{r} 9 \\ 210 \\ 4305500 \\ - 2228375 \\ \hline 77125 \end{array}$$

$$\begin{array}{r} 2 \\ 4305500 \\ - 2228375 \\ \hline 077125 \end{array}$$

$$\begin{array}{r} 4305500 \\ - 2228375 \\ \hline 2077125 \end{array}$$

Money left with Ahmad = 2,077,125 Afs

Practice

- Nasir had 9,800,390 Afghanis. He donated 4,399,421 for the construction of the mosque. How much money is left with him?
- There were 1,304,560 children in Kabul to be vaccinated. 856,312 children were vaccinated in phase 1. How many children needed to be vaccinated in phase 2?

- Copy and find the missing

7,305,301	-	3,221,454	=	
-		-		=
4,459,702	-		=	2,093,249
=		=	=	
	-	855,001	=	1,990,598

Objectives: Add and subtract millions

Study

The number of Afghan refugees in Pakistan is 1,829,405.

The number of Afghan refugees in Iran is 2,165,506.

A group of 304,609 refugees from Pakistan return to Afghanistan, and another group of 182,675 refugees from Iran return to Afghanistan.

We can find out the total number of refugees that have returned to Afghanistan and the total number of refugees that are still in Pakistan and Iran.

Refugees in Iran: 2,165,506

Refugees returning from Iran: 182,675

Refugees remaining in Iran: $2,165,506 - 182,675 = 1,982,831$

Refugees in Pakistan: 1,829,405

Refugees returning from Pakistan: 304,609

Refugees remaining in Pakistan: $1,829,405 - 304,609 = 1,524,796$

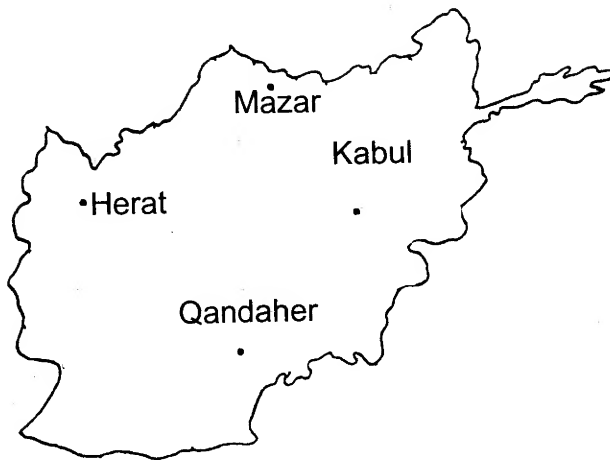
Total number of refugees returning to Afghanistan: $304,609 + 182,675 = 487,284$

Total number of refugees remaining in both Pakistan and Iran:

$1,524,796 + 1,982,831 = 3,507,627$

Practice

- Look at the population of some Afghan cities and then answer the following questions.



Populations

	1991	1979
Kabul City	1,526,971	931,418
Mazar	703,990	58,014
Qandahar	711,037	567,204
Herat	931,473	769,111

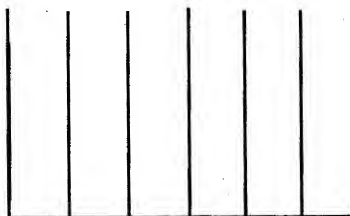
- How many more people lived in Kabul in 1991 than in 1979?
- What is the difference between the population of Kabul City in 1991 as compared to the combined population of Mazar and Qandahar in 1991?
- The population of which city grew more from 1979 to 1991 Mazar or Herat.

- Copy and find the missing numbers:

$$\begin{array}{ccccc}
 \xrightarrow{\hspace{2cm}} & & \xrightarrow{\hspace{2cm}} & & \\
 \boxed{7,658,342} & + & \boxed{} & = & \boxed{9,789,987} \\
 \downarrow & & & & \downarrow \\
 & + & & & - \\
 \boxed{2,131,645} & + & \boxed{} & = & \boxed{2,131,645} \\
 \downarrow & & & & \downarrow \\
 & = & & & = \\
 \boxed{} & - & \boxed{2,131,645} & = & \boxed{} \\
 \xrightarrow{\hspace{2cm}} & & \xrightarrow{\hspace{2cm}} & &
 \end{array}$$

Objectives: Assess Place Value, Addition, Subtraction.

1. The number of Afghan refugees in Iran is:
Two million one hundred sixty five thousand five hundred and six.
Draw the abacus and show the number.



2. Write the place value of the circled digits:
a. 1, 4 7 5, 3 0 0 b. 3, 6 8 5, 7 2 1
3. Compare the following numbers use < or > .
a. 2,385,0 0 2 2,385,020
b. 8,915,319 8,435,591

4. Look at the table.

Province	Population
Badakhshan	6 1 5, 1 5 6
Faryab	6 7 0, 9 2 2
Helmand	6 4 0, 1 6 5
Nangarhar	9 2 2, 5 5 0

- a. What is the total population of Badakhshan and Faryab?
b. How many more people live in Nangarhar than Helmand?
5. There are 1,765,302 Afghan Refugees in Pakistan. 585,272 go back to Afghanistan. How many refugees remain in Pakistan?
6. Ahmad bought a house for 4,383,729 Afghanis. He sold it one year later. He made a profit of 394,200 Afghanis. How much did Ahmad sell his house for?
7. 2,379,203 Afghan children need to be vaccinated 394,851 of them are girls. How many boys need to be vaccinated?

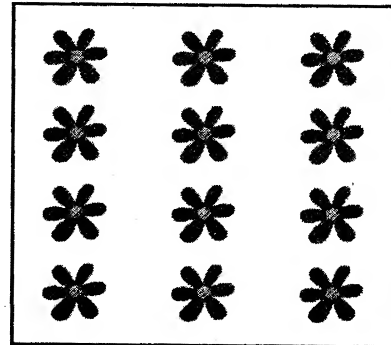
Objectives: Review multiplication tables 1- 5.

Study

There are 3 flowers in each group.
How many flowers are in 4 groups?

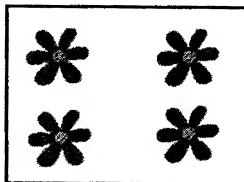
$$3 + 3 + 3 + 3 = 12$$

$$4 \times 3 = 12$$

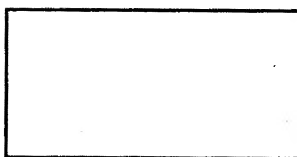


Practice

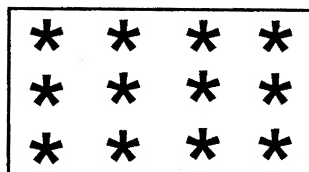
1. Make the multiplication sentences.
Follow the example.



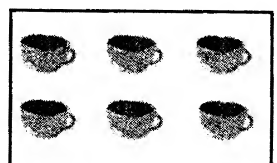
$$2 \times 2 = 4$$



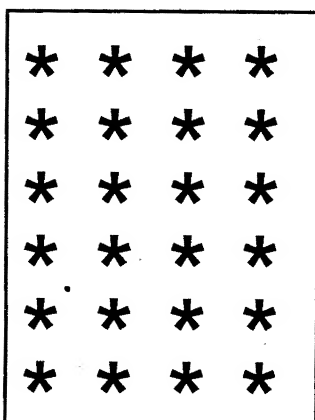
a.



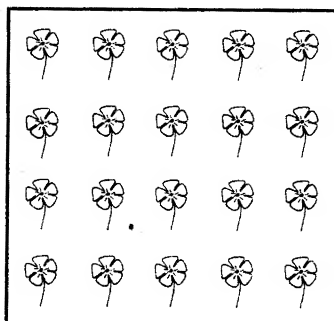
b.



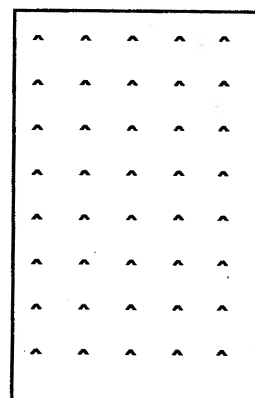
c.



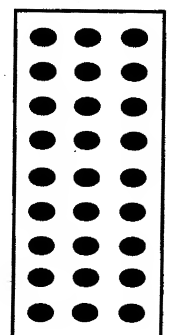
d.



e.

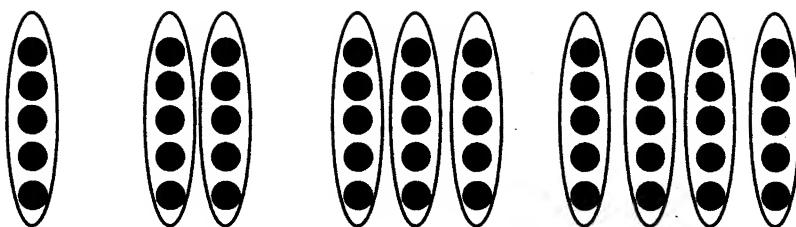


f.



g.

2. Follow the example



Number of pods	1			
Number of peas	5			

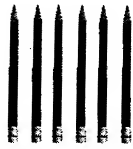
3. Complete the following table.

x	1	2	3	4	5	6	7	8	9
1		2		4	5	6		8	
2	2		6	8			14		18
3		6			15	18		24	
4	4		12		20		28		36
5		10		20		30		40	

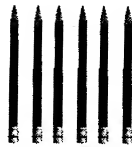
Objective: Review multiplication tables 6 - 7

Study

There are 6 pencils in each bundle
How many pencils are in 3 bundles?



6



6

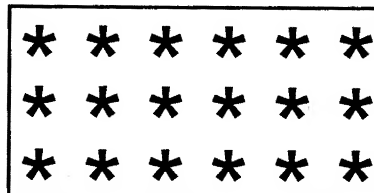


6

$$6 + 6 + 6 = 18$$

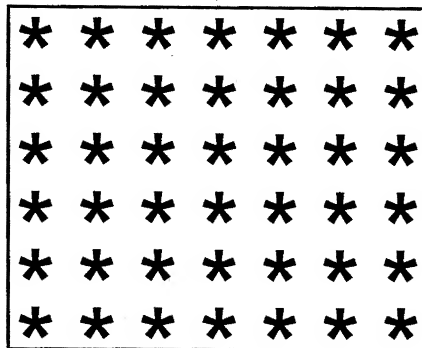
$$6 \times 3 = 18$$

$$3 \times 6 = 18$$

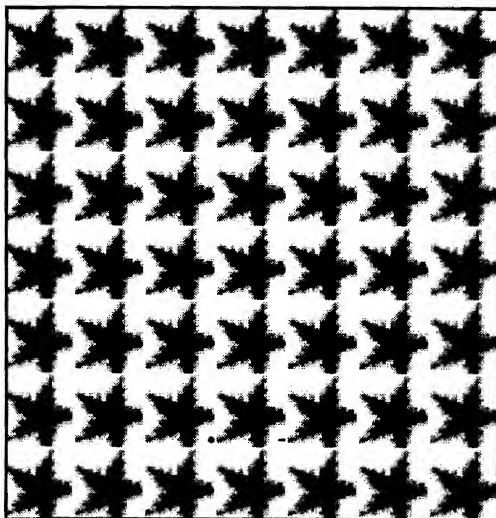


Practice

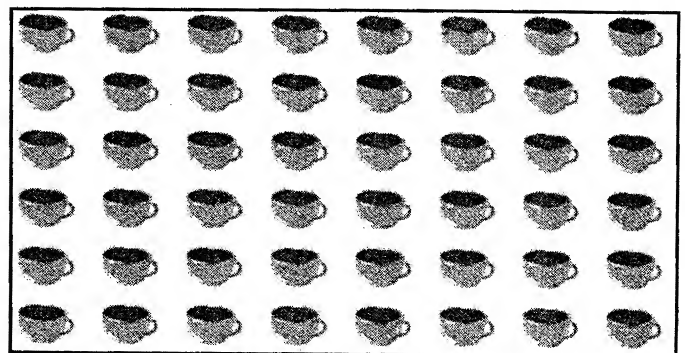
1. Follow the example;



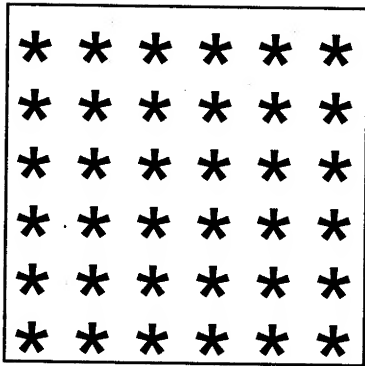
$$\begin{array}{rcl} 6 & \times & 7 = 42 \\ 7 & \times & 6 = 42 \end{array}$$



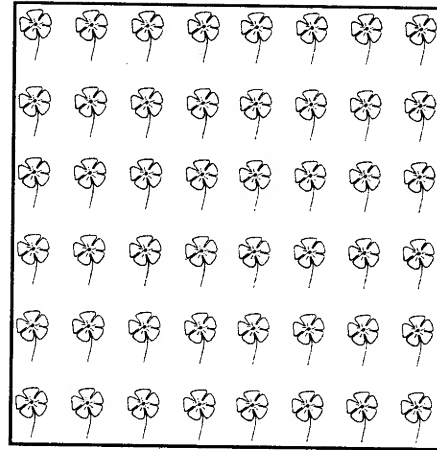
a. $\begin{array}{rcl} 7 & \times & \\ & \times & = 49 \end{array}$



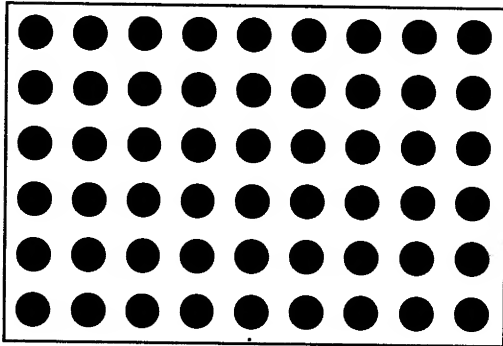
b. $\begin{array}{rcl} 7 & \times & \\ & \times & 7 = \end{array}$



c. $\begin{array}{r} x \\ x \end{array} = 36$



d. $\begin{array}{r} x \\ x \end{array} =$



e. $\begin{array}{r} x \\ x \end{array} =$

2. Complete the multiplication tables. Follow the example.

a.

	6	7	6	7	7	6	6	7	6	6	7	7	7	6
x	5	7	6	3	4	6	5	3	8	6	8	9	4	5
	30													

b.

x	8	9	7	8	9	7	6	8	9
6		54		48			36		
7	56								

Objective: Review multiplication table 8

Study

In school there are 8 teams. Each team has 7 students. Find out how many students are in all the groups.

Look at the diagram and count the students.

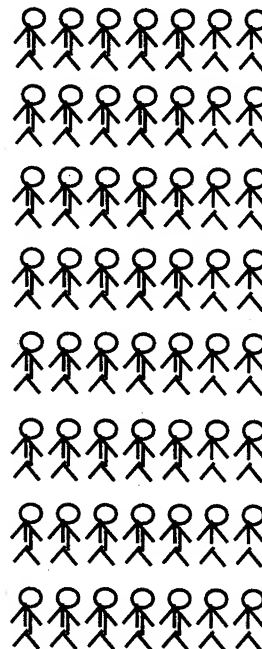
8 teams with 7 students

$$7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 = 56$$

$$8 \times 7 = 56$$

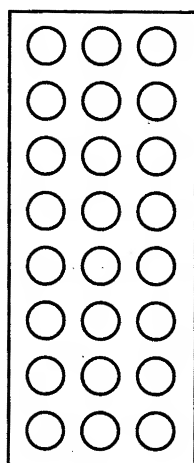
7 students in eight teams

$$7 \times 8 = 56$$

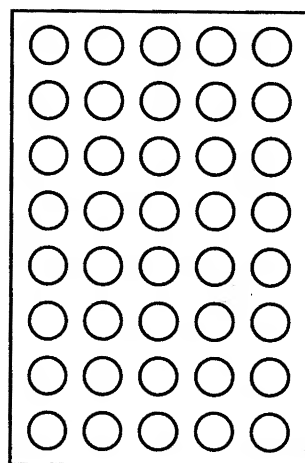


Practice

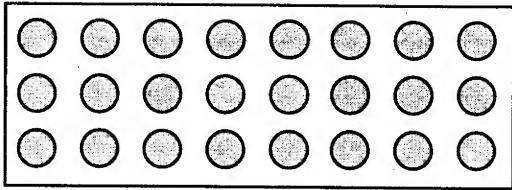
1. Multiply



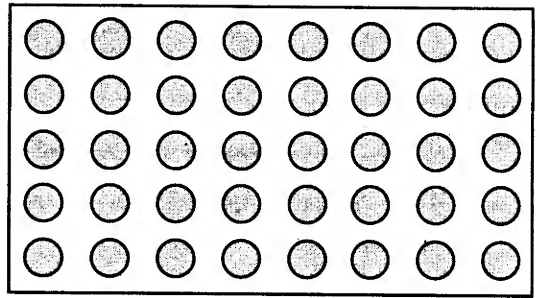
a. $\begin{array}{r} \times \\ \times \end{array} =$



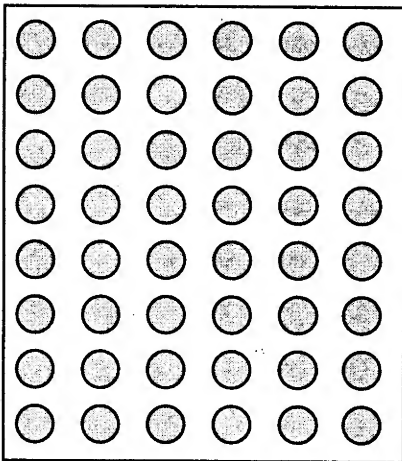
b. $\begin{array}{r} \times \\ \times \end{array} =$



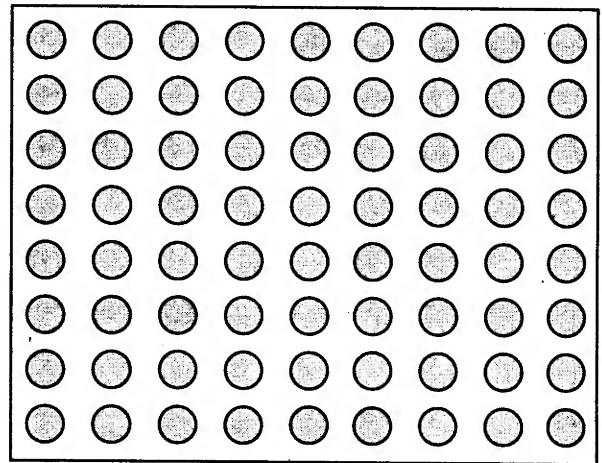
c. $\begin{array}{ccc} & x & = \\ x & & = \end{array}$



d. $\begin{array}{ccc} & x & = \\ x & & = \end{array}$



e. $\begin{array}{ccc} & x & = \\ x & & = \end{array}$



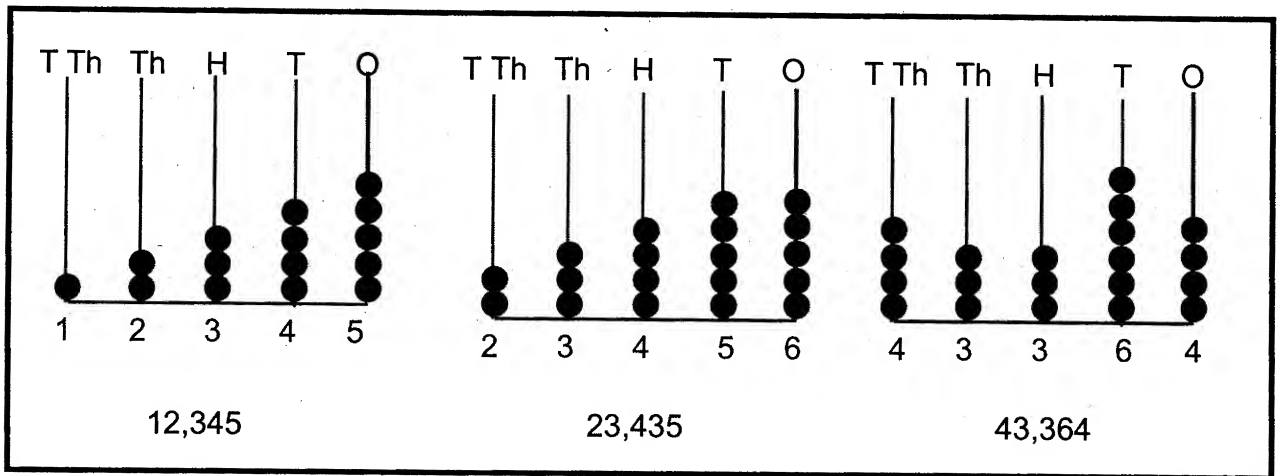
f. $\begin{array}{ccc} & x & = \\ x & & = \end{array}$

2. Find the missing numbers.

	1	2	3	4	5	6	7	8	9
x	8	8	8	8	8	8	8	8	8
	8								

Objective: Review place value up to 10,000 (ten thousands).

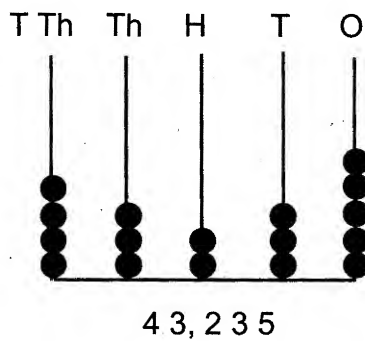
Study



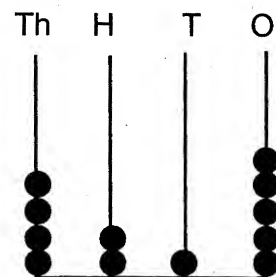
Practice

1. Write the numbers shown in the abacuses

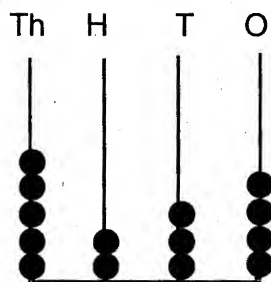
Example:



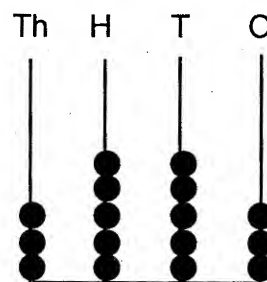
a.



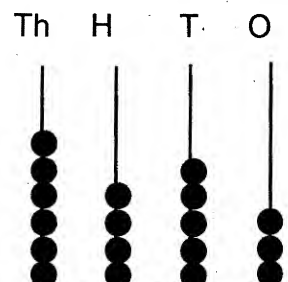
b.



c.



d.



Objectives: Review multiplication table 9

Study

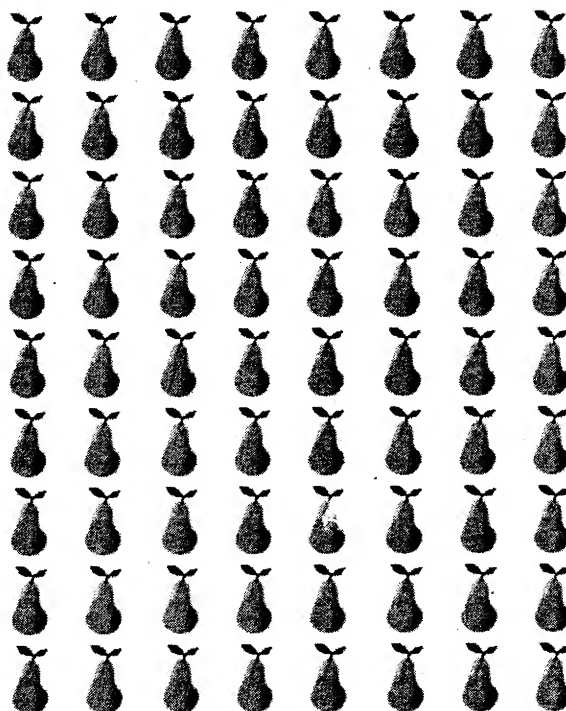
If we have 9 plates, in each plate we have 8 pears. Find out how many pears in all the plates.

Look at the diagram and count the pears.

$$8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = 72$$

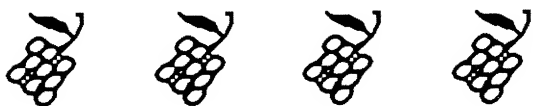
$$9 \times 8 = 72$$

$$8 \times 9 = 72$$



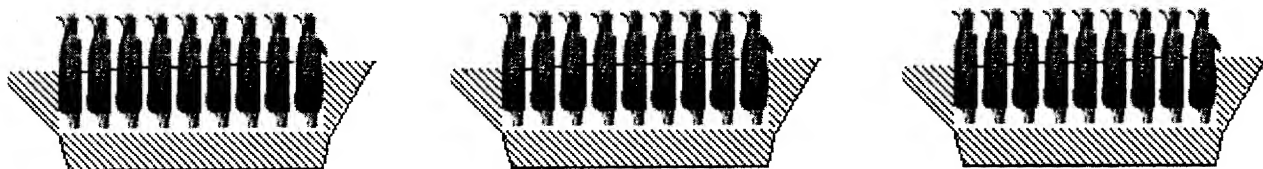
Practice

1. Find the number of grapes in the bunches.



$$\begin{array}{rcl} \times & & = \\ \times & & = \end{array}$$

2. Find the number of corn in 3 baskets



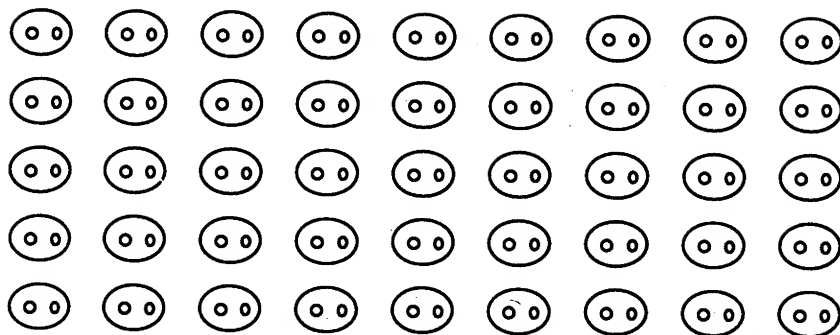
$$\begin{array}{rcl} \times & & = \\ \times & & = \end{array}$$

3. Count the number of lights in trees



$$\begin{array}{rcl} \times & & = \\ \times & & = \end{array}$$

4. Find the number of buttons.



$$\begin{array}{rcl} \times & & = \\ \times & & = \end{array}$$

5. Multiply to find the missing numbers.

a.

3	9	27
8	9	
9	9	
6	9	
7	9	

b.

1	2	3	4	5	6	7	8	9
9	9	9	9	9	9	9	9	9
9				45				

Objective: Multiply by 10, 100, 1000

Study

To multiply a number by 10 we write the number with 1 zero to the right side of the number

Example $5 \times 10 = 50$, $25 \times 10 = 250$, $210 \times 10 = 2,100$

To multiply a number by 100 we write the number with two zeros to the right side of the number.

Example $3 \times 100 = 300$, $20 \times 100 = 2,000$, $291 \times 100 = 29,100$

To multiply a number by 1000 we write the number with three zeros to the right side of the number.

Example $5 \times 1,000 = 5,000$, $272 \times 1000 = 272,000$

Practice

1. Follow the examples

$$5 \times 10 = 50 \quad 21 \times 100 = 2100 \quad 3 \times 1000 = 3000$$

- | | |
|------------------------|------------------------|
| a. $21 \times 10 =$ | j. $911 \times 100 =$ |
| b. $55 \times 100 =$ | k. $59 \times 1,000 =$ |
| c. $44 \times 1,000 =$ | l. $121 \times 100 =$ |
| d. $51 \times 100 =$ | m. $101 \times 100 =$ |
| e. $2 \times 100 =$ | n. $91 \times 1,000 =$ |
| f. $92 \times 1,000 =$ | o. $99 \times 10 =$ |
| i. $191 \times 10 =$ | |

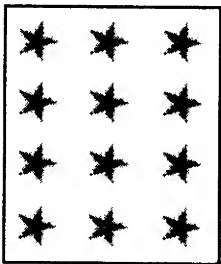
2. Follow the examples

$$96 \times 10 = 960 \quad 11 \times 100 = 1,100 \quad 5 \times 1,000 = 5,000$$

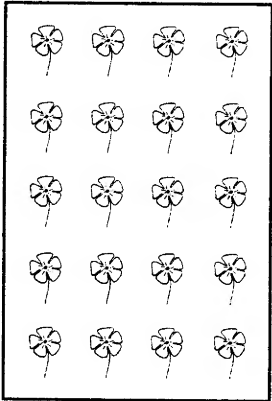
- | | |
|-------------------------|-------------------------|
| a. $82 \times = 8,200$ | g. $24 \times = 24,000$ |
| b. $48 \times = 48,000$ | h. $64 \times = 640$ |
| c. $54 \times = 540$ | i. $19 \times = 19,000$ |
| d. $42 \times = 420$ | j. $92 \times = 92,000$ |
| e. $65 \times = 6,500$ | k. $5 \times = 45,000$ |
| f. $42 \times = 420$ | l. $94 \times = 940$ |

Objective: Assess multiplication

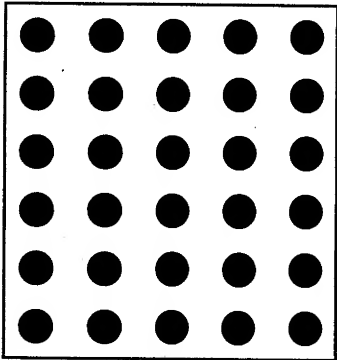
1. Write the products in two forms.



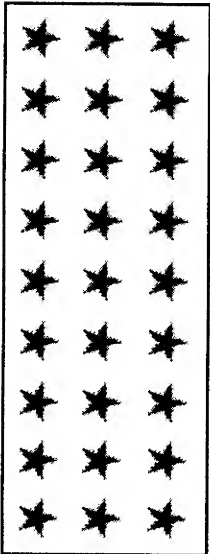
a. $\begin{array}{cc} x & = \\ x & = \end{array}$



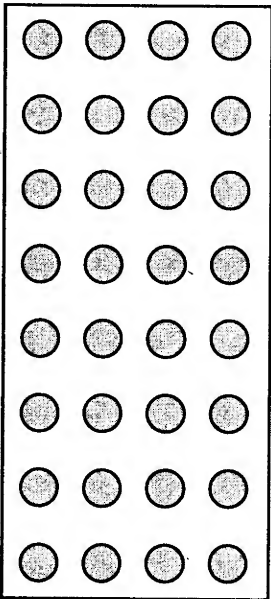
b. $\begin{array}{cc} x & = \\ x & = \end{array}$



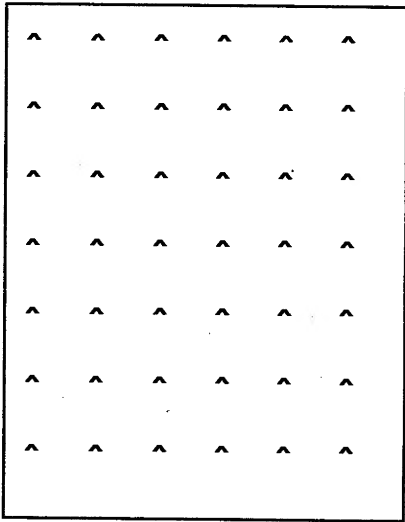
c. $\begin{array}{cc} x & = \\ x & = \end{array}$



d. $\begin{array}{cc} x & = \\ x & = \end{array}$



e. $\begin{array}{cc} x & = \\ x & = \end{array}$



f. $\begin{array}{cc} x & = \\ x & = \end{array}$

2. Complete the table.

x	1	2	3	4	5	6	7	8	9
1		2		4		6		8	
2	2	4			10		14		
3			9			18		24	
4	4	8		16			28		36
5	5	10			25	30			45
6	6	12		24		36	42		
7	7	14			35	42			63
8	8	16		32			56		
9	9	18			45		63		81

3. Complete the multiplication

a. $96 \times \quad = 960$

f. $210 \times 100 =$

b. $25 \times 10 =$

g. $4 \times 1000 =$

c. $105 \times 10 =$

h. $15 \times \quad = 15000$

d. $82 \times \quad = 8200$

i. $50 \times \quad = 5000$

e. $42 \times 100 =$

Objectives: Multiply 2 and 3 digit numbers by 2 digits.

Study

Ahmad bought 15 pairs of sandals. If the price of one pair was 32 Afghnis. How much money did he spend ? To find out the amount of money that Ahmad spent we multiply the numbers as follows:

$$\begin{array}{r} 32 \\ \times 15 \\ \hline \end{array} \longrightarrow 1 \text{ ten and 5 ones}$$

First we multiply 32 by 5 ones $\longrightarrow 32 \times 5 = 160$

$$\begin{array}{r} 32 \\ \times 15 \\ \hline 160 \\ \hline \end{array}$$

Then we multiply 32 by 1 ten $\longrightarrow 32 \times 10 = 320$

Then we add the two products $\longrightarrow 160 + 320 = 480$

480

For multiplying 3 digits by 2 digits we follow the same method.

Example

$$\begin{array}{r} 402 \\ \times 26 \\ \hline \end{array} \quad 2 \text{ tens and 6 ones}$$

$$\begin{array}{r} 402 \\ \times 26 \\ \hline 2412 \\ 8040 \\ \hline 10452 \end{array} \begin{array}{l} \longrightarrow 402 \times 6 = 2412 \\ \longrightarrow 402 \times 20 = 8040 \\ \longrightarrow 2412 + 8040 = 10452 \end{array}$$

Practice

1. Multiply

a. $\begin{array}{r} 302 \\ \times 35 \\ \hline \end{array}$

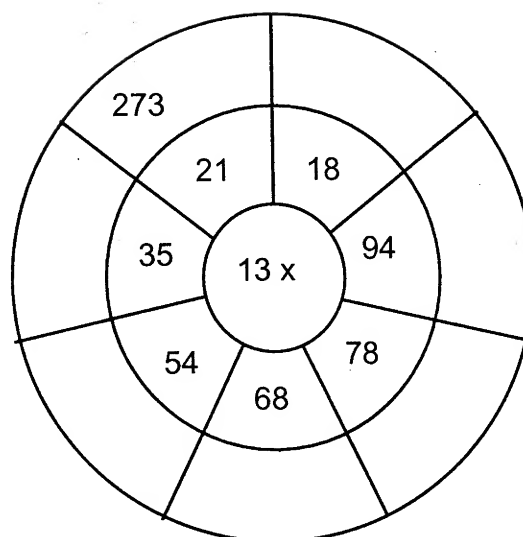
b. $\begin{array}{r} 105 \\ \times 36 \\ \hline \end{array}$

c. $\begin{array}{r} 286 \\ \times 45 \\ \hline \end{array}$

2. Copy and fill in the missing numbers.

35	x	156	=	
x				
13	x	198	=	
=				
	x	56	=	
x		x		
23	x	52	=	
=		=		

2. Copy and find the missing numbers
Follow the example.



3. Solve the following word problems:

- If 1 crate contains 76 oranges. Find out the number of oranges in 34 crates?
- A school lunch costs 92 Afghanis per student. If there are 58 students in class 1, how much will be the total cost of the lunch for that class?
- Akbar bought 86 bags of watermelons. If each bag contained 39 watermelons, find out the total number of watermelons that Akbar bought?
- Karim bought 265 kg of sugar. If the cost of one kg is 14 Afghanis, how much money did Karim spend?

Study

$$\begin{array}{r} 234 \\ \times 123 \\ \hline 702 \\ 4680 \\ + 23400 \\ \hline 28782 \end{array} \quad \begin{array}{l} \longrightarrow \\ \longrightarrow \\ \longrightarrow \end{array} \quad \begin{array}{l} (234 \times 3) \\ (234 \times 20) \\ (234 \times 100) \end{array}$$

1. Multiply

b.

	x	4	5	0
	2	3	4	
				→ (450 x 4)
				→ (450 x 30)
+				→ (450 x 200)

a.
$$\begin{array}{r} 367 \\ \times 246 \\ \hline \end{array}$$

→ (367×6)
→ (367×40)
→ (367×200)

b.

$$\begin{array}{r} 204 \\ \times 356 \\ \hline \end{array}$$

→ (204 x 6)
→ (204 x 50)
→ (204 x 300)

- The total number of notebooks =

Objectives: Multiply numbers that contain zero

Study

We multiply 0×9

$$0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0$$

$$0 \times 9 = 0$$

$$9 \times 0 = 0$$

Example 1: If one box contains 119 pencils. Find the number of pencils in 105 boxes.

$$\begin{array}{r} 119 \\ \times 105 \\ \hline 595 \\ 0000 \\ 11900 \\ \hline 12495 \end{array} \quad \begin{array}{l} (119 \times 5) \\ (119 \times 0) \\ (119 \times 100) \end{array}$$

Example 2

$$\begin{array}{r} 1207 \\ 3036 \\ \hline 7242 \\ 36210 \\ 00000 \\ 3621000 \\ \hline 3654452 \end{array} \quad \begin{array}{l} (1207 \times 6) \\ (1207 \times 30) \\ (1207 \times 0) \\ (1207 \times 3000) \end{array}$$

Practice

1. Multiply.

a. $\begin{array}{r} 214 \\ \times 108 \\ \hline \end{array}$

b. $\begin{array}{r} 231 \\ \times 201 \\ \hline \end{array}$

c. $\begin{array}{r} 4174 \\ \times 1035 \\ \hline \end{array}$

d. $\begin{array}{r} 3107 \\ \times 3014 \\ \hline \end{array}$

2. Multiply.

24	x	206	=	
12	x	206	=	
36	x	206	=	

Study

				1	2	5	6	
			x	9	9	8	1	
				1	2	5	6	← (1 2 5 6 x 1)
				0	4	8	0	← (1 2 5 6 x 8 0)
		1	1	3	0	4	0	← (1 2 5 6 x 9 0 0)
1	1	3	0	4	0	0	0	← (1 2 5 6 x 9 0 0 0)
1	2	5	3	6	1	3	6	

a.

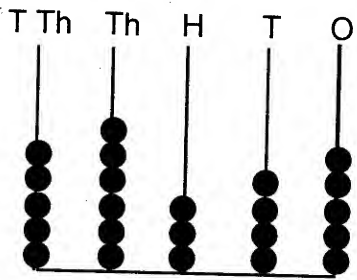
$$\begin{array}{r} 2013 \\ \times 4302 \\ \hline \end{array}$$

b.

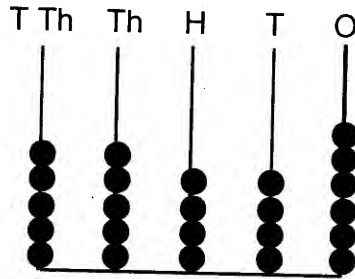
$$\begin{array}{r} 1203 \\ \times 2011 \\ \hline \end{array}$$

- 39

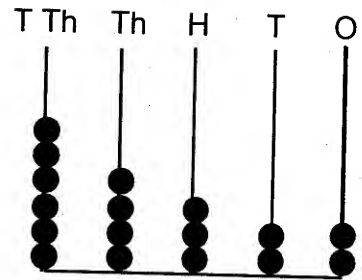
2. Write the numbers shown in the abacuses



a.



b.



c.

3. Write the following numbers:

Example: Five thousand six hundred and fifty seven = 5, 6 57

a. Nine thousand seven hundred and forty eight =

b. Eighth thousand six hundred and eighty nine =

4. Write the place value of the underlined digit:

Example: 7,651 thousands

a. 1,543

b. 9,856

c. 8,762

Objectives: Assess multiplication

1. Multiply the numbers.

a.
$$\begin{array}{r} 1535 \\ \times 33 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 3456 \\ \times 212 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 5562 \\ \times 105 \\ \hline \end{array}$$

2. Multiply.

→				
374	x	171	=	
x		x		
8	x	12	=	96
=		=		
	x		=	6139584

3. Nabi drives 185 km everyday to go to work. If he works 28 days in a month, find out the total distance that he drives in one month?

One day trip =

28 days trip =

4. Wali wants to invite 455 guests to his wedding. If the hotel charge is 3,056 Afghanis per person, how much money does he need for his wedding?

Objectives: Introduce division as opposite multiplication using divisor 2 - 3

Study

How many flowers are in one row ?

$$21 \div 3 = 7$$



How many flowers are in one column ?

$$21 \div 7 = 3$$



Division is opposite multiplication

$$21 \div 3 = 7$$

$$3 \times 7 = 21$$

$$21 \div 7 = 3$$

$$7 \times 3 = 21$$

Division is repetitive subtraction

How many 3 are in 21

$$21 \div 3 = 7$$

$$21 - 3 = 18$$

$$18 - 3 = 15$$

$$15 - 3 = 12$$

$$12 - 3 = 9$$

$$9 - 3 = 6$$

$$6 - 3 = 3$$

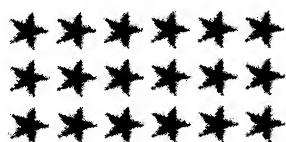
$$3 - 3 = 0$$

$$21 \div 3 = 7$$

Practice

1. How many stars are in each column and each row. Follow the example

Example

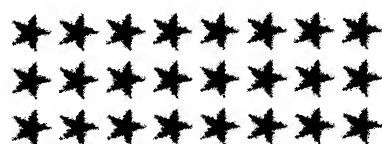


$$18 \div 3 = 6$$

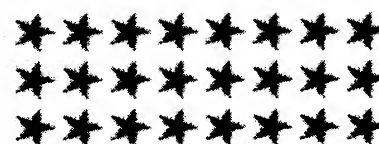
$$18 \div 6 = 3$$



a.

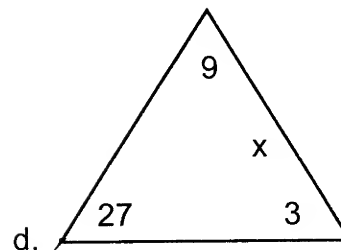
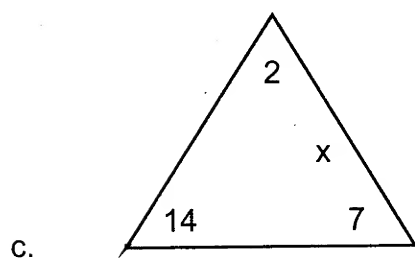
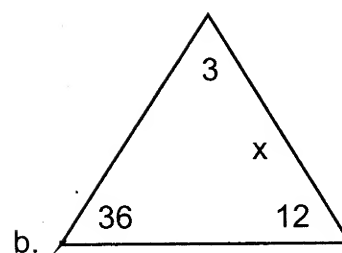
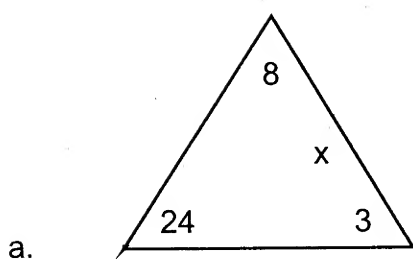
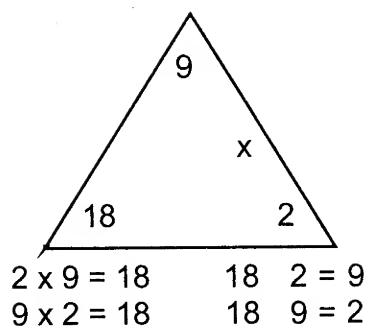


b.



c.

2. Follow the example



3. Write the missing numbers.

a. 21 = 7

b. 21 7 =

b. 18 = 9

c. 18 9 =

d. 27 = 9

e. 27 9 =

f. 24 2 =

g. 24 = 2

h. 18 = 3

i. 18 3 =

j. 15 3 =

k. 15 = 3

Objectives: Introduce division as opposite multiplication using divisor 4 - 5

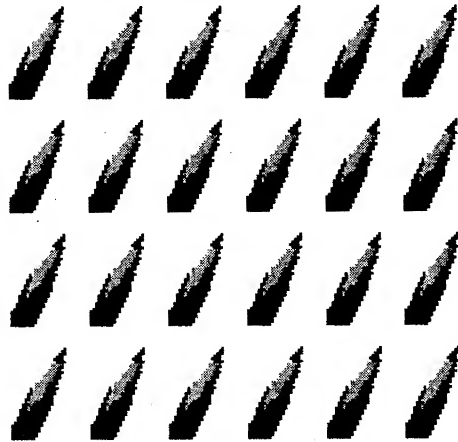
Study

How many pencils are in one row ?

$$24 \div 4 = 6$$

How many pencils are in one column ?

$$24 \div 6 = 4$$



Division is the opposite of multiplication.

$$24 \div 4 = 6$$

$$4 \times 6 = 24$$

$$24 \div 6 = 4$$

$$6 \times 4 = 24$$

Division is repetitive subtraction.

When we divide 35 by 5 how many times do we subtract 5 as shown below?

35 5

$$35 - 5 = 30 \quad (1)$$

$$30 - 5 = 25 \quad (2)$$

$$25 - 5 = 20 \quad (3)$$

$$20 - 5 = 15 \quad (4)$$

$$15 - 5 = 10 \quad (5)$$

$$10 - 5 = 5 \quad (6)$$

$$5 - 5 = 0 \quad (7)$$

$$35 \div 5 = 7$$

Practice

1. a. Find the missing numbers

10	- 4	=		- 4	=		- 4	=		- 4	=	
----	-----	---	--	-----	---	--	-----	---	--	-----	---	--

- b. How many times do you subtract 4?

2. Complete the problems:

a.
$$\begin{array}{r} 32 \\ \times 4 \\ \hline \end{array} = 32$$

d.
$$\begin{array}{r} 36 \\ \times 4 \\ \hline \end{array} = 36$$

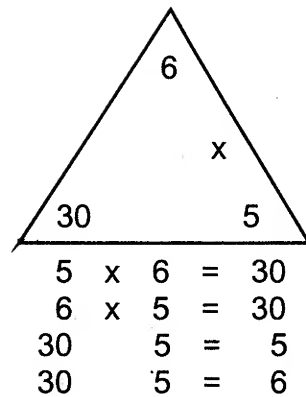
b.
$$\begin{array}{r} 45 \\ 9 \times \\ \hline \end{array} = 45$$

e.
$$\begin{array}{r} 35 \\ \times 5 \\ \hline \end{array} = 35$$

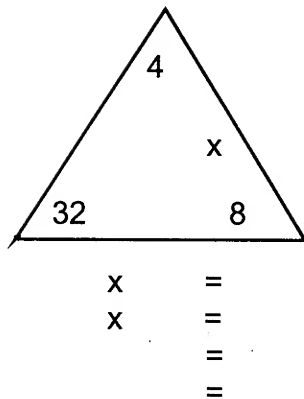
c.
$$\begin{array}{r} 25 \\ 5 \times 5 \\ \hline \end{array} =$$

f.
$$\begin{array}{r} 12 \\ 3 \times 4 \\ \hline \end{array} = 12$$

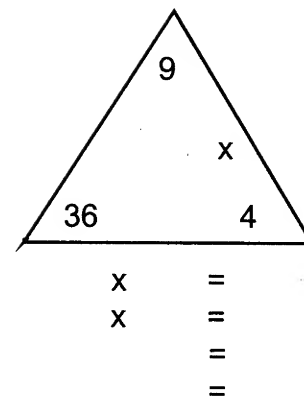
3. Follow the example



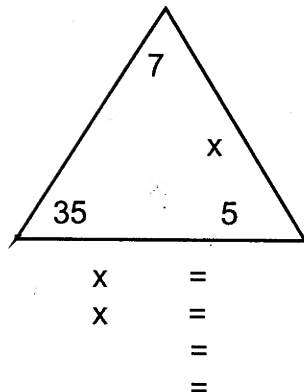
a.



b.



c.



4. The number of students in class 4 is 40. We want to arrange their seating in five rows. Find the number of students in each row.

Objectives: Introduce division as opposite multiplication using divisor 6 - 7

Study

How many apples are in one row ?

$$42 \div 6 = 7$$

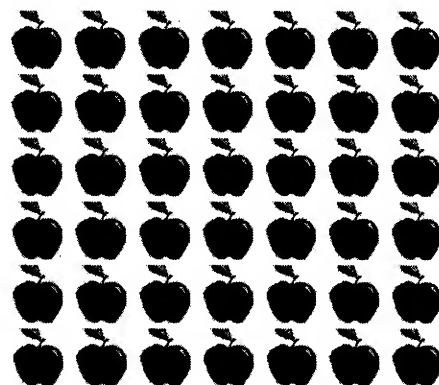
How many apples are in one column ?

$$42 \div 7 = 6$$

Division is the opposite of multiplication.

$$42 \div 6 = 7 \quad 6 \times 7 = 42$$

$$42 \div 7 = 6 \quad 7 \times 6 = 42$$



Division is repetitive subtraction

When we divide 42 by 6 how many times do we subtract 6 from 42 as shown below:

$$42 \div 6$$

$$\begin{array}{rclcl} 42 & - & 6 & = & 36 & (1) \\ 36 & - & 6 & = & 30 & (2) \\ 30 & - & 6 & = & 24 & (3) \\ 24 & - & 6 & = & 18 & (4) \\ 18 & - & 6 & = & 12 & (5) \\ 12 & - & 6 & = & 6 & (6) \\ 6 & - & 6 & = & 0 & (7) \end{array}$$

$$42 \div 6 = 7$$

Practice

1. Copy and complete the table.

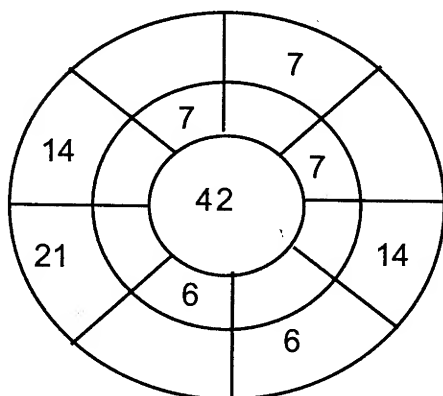
	24	28	36	42	48	54	56	63	30
	6		6		6			7	
	=	=	=	=	=	=	=	=	=
		4		6		9	8		5

2. Use the three given numbers to complete the table.

→

6, 7, 42				
6	x		=	42
42		6	=	
7	x		=	42
42			=	6

3. Copy and find the missing numbers.



4. Nabi has 54 apples. He would like to distribute them among his 6 classmates. How many apples can he give to each of his classmates ?
5. Akber invited 63 students to a party. He wants to rent 7 mini-buses to bring them to his house . How many students would have to share one mini-bus in such a way that the number of students is equal in each mini-bus?

Objectives: Introduce division as opposite multiplication using divisor 8 - 9

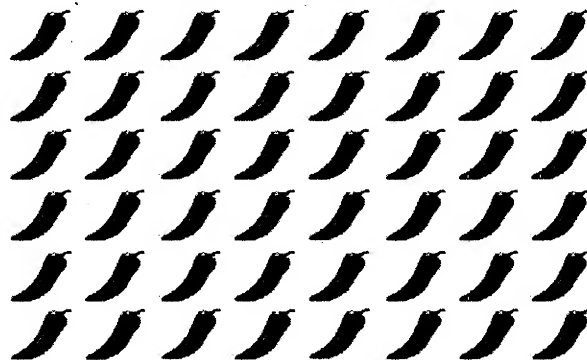
Study

How many peppers are in one row ?

$$48 \div 6 = 8$$

How many peppers are in one column?

$$48 \div 8 = 6$$



Division is opposite multiplication.

$$48 \div 6 = 8 \quad 6 \times 8 = 48$$

$$48 \div 8 = 6 \quad 8 \times 6 = 48$$

Division is repetitive subtraction.

How many 9s are in 36 ?

$$36 \div 4$$

$$36 - 9 = 27$$

$$27 - 9 = 18$$

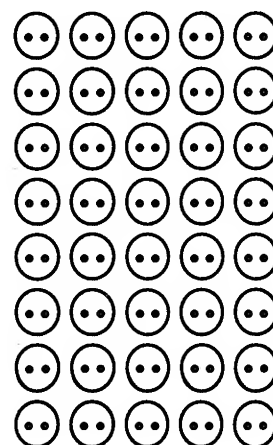
$$18 - 9 = 9$$

$$9 - 9 = 0$$

$$36 \div 4 = 9$$

Practice

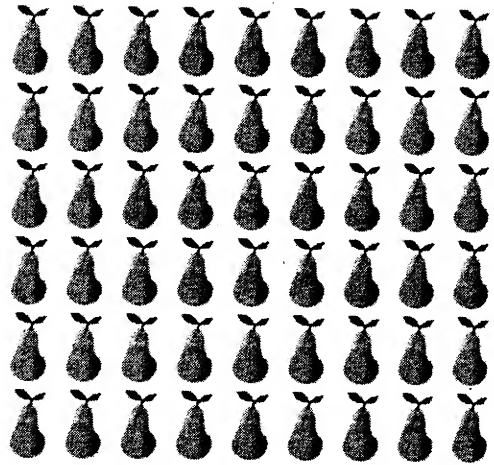
1. a. How many buttons are in one row?
- b. How many buttons are in one column?
- c. Write four operations to express division and multiplication ?



2. a. How many pears are in each row?

b. How many rows of pears are in each column?

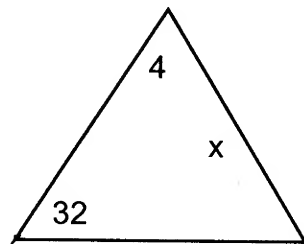
c. Write four operations to express division and multiplication.



3. Complete the division table.

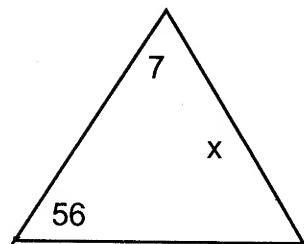
72	64	63	48	40	36	24	18	8
8		9		8	9		9	
	8		6			3		1

4. Follow the example:

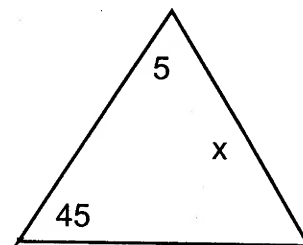


$$\begin{array}{l} 32 \div 8 = 4 \\ 32 \div 4 = 8 \end{array} \quad \begin{array}{l} 8 \times 4 = 32 \\ 4 \times 8 = 32 \end{array}$$

a.

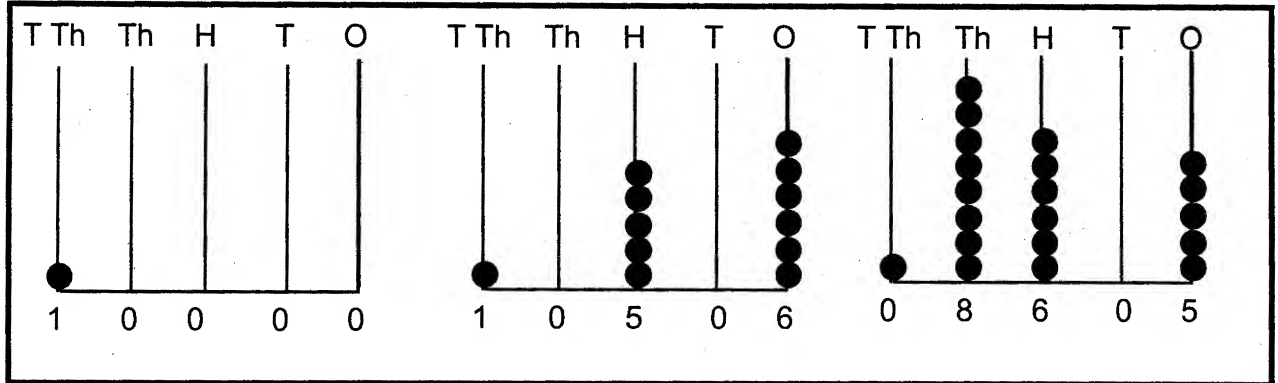


b.



Objective: Review 0 (zero) as a place value holder

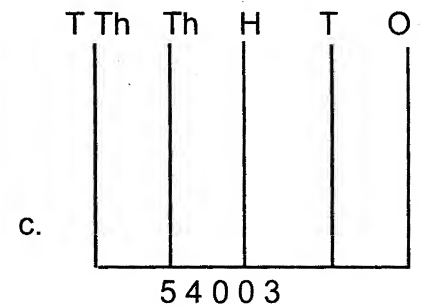
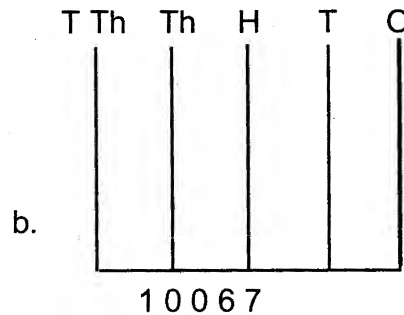
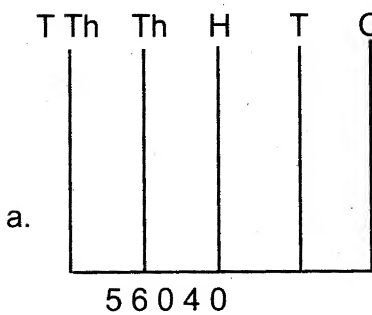
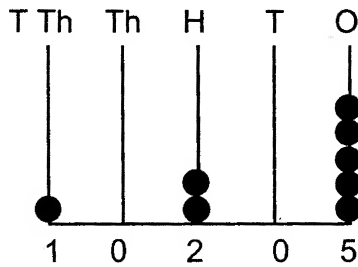
Study



Practice

1. Copy and show the numbers on the abacus

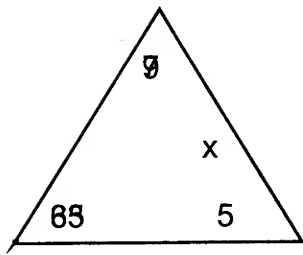
Follow the example:



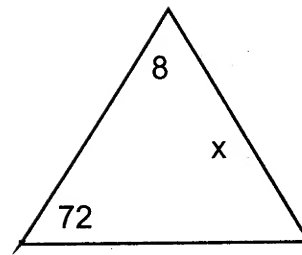
2. Follow the example:

10 Thousands	Thousands	Hundreds	Tens	Ones	
5	3	0	4	1	53,041
					60,243
					35,405
					70,604

c.



c.



5. Solve the problems.

a. $\frac{24}{24} \times 8 = 8$

b. $\frac{48}{48} \times 6 = 6$

c. $\frac{32}{32} \times 4 = 4$

d. $\frac{18}{18} \times 9 = 9$

e. $\frac{36}{36} \times 9 = 9$

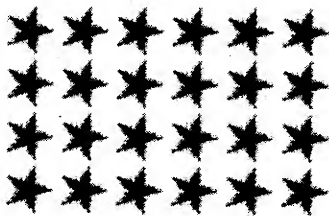
f. $\frac{63}{63} \times 7 = 7$

6. Rabia receives 8 apples from her mother each time she makes her bed. How many times must she make her bed to get 56 apples?

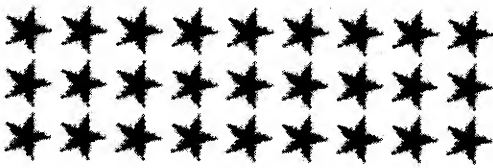
Objectives: Review division by 2,3,4,5,6,7,8,9

Study

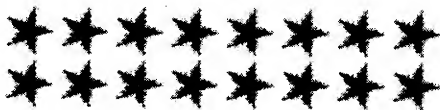
How many stars are in each row and each column?



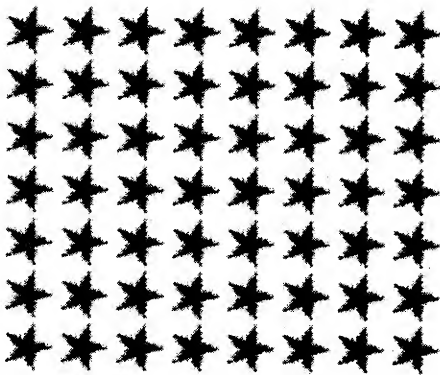
24 4 = 6
24 6 = 4



27 3 = 9
27 9 = 3



16 2 = 8
16 8 = 2



56 7 = 8
56 8 = 7

Practice

1. Complete the division table.

18	72	27		63	48		36		64	63		36	45		48		80
2		3	7	9		3	4	9		7	6	4		7		9	8
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
	9		8		8	5		5	8		8		9	8	6	7	

2. Complete the division table.

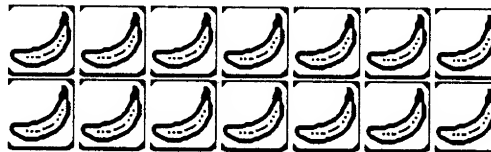
	64	56	63	72	49	72	63	40	54				45		63			56
8	8	7				9	7		9	8	7	8		8	7	9	9	7
=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
9			7	9	7		9	5		7	5	4	5	8		9	6	8

3. Tailor Moskin uses 8 buttons for each shirt he stitches. If 56 buttons have been used, how many shirts has he made ?
4. There are 4 children to each table in the school class room. If 32 children are in the class How many tables are needed ?
5. Jamila has 81 pieces of chewing gum. She wants to share them between her 9 friends. How many pieces will each one get?

Objective: Assess division by one digit

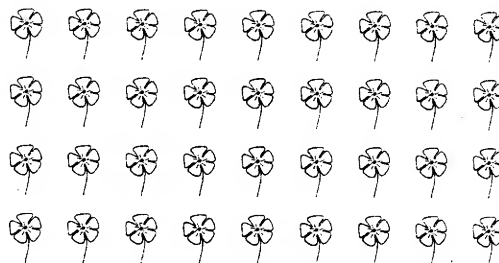
1. Look at the diagram

- a. How many bananas are in one row ?
b. How many bananas are in one column ?



2. Look at the diagram

- a. How many flowers are in one column?
b. How many flowers are in one row ?
c. Now write four operation to express division and multiplication.



3. Complete the division table.

56	45	28	21	48	72	35	24	18
8		7		6		7	8	
=	=	=	=	=	=	=	=	=
	5		7		9			2

4. Solve the problems.

a. $\begin{array}{r} 63 \\ 63 \end{array} \begin{array}{l} = 9 \\ 9 = \end{array}$

b. $\begin{array}{r} 48 \\ 48 \end{array} \begin{array}{l} = 8 \\ 8 = \end{array}$

c. $\begin{array}{r} 40 \\ 40 \end{array} \begin{array}{l} 8 = \\ = 8 \end{array}$

d. $\begin{array}{r} 54 \\ 54 \end{array} \begin{array}{l} = 6 \\ 5 = \end{array}$

e. $\begin{array}{r} 72 \\ 72 \end{array} \begin{array}{l} 8 = \\ = 8 \end{array}$

f. $\begin{array}{r} 56 \\ 56 \end{array} \begin{array}{l} = 8 \\ 8 = \end{array}$

Word problems

5. 7 boys divide 63 mangoes equally between them . How many mangoes will each boy get ?
6. The cost of 1 postage stamp is 9 Afg . If Amad has 72 Afg. How many stamps can he buy ?

Objective: Divide 4 digit numbers by one digit without remainder

Study

5 Schools can accommodate a total of 8,975 students.

How many students will go to each school?

Total number of students (dividend) = 8,975 Number of schools (divisor) = 5

When we divide 8975 by 5.

We count the divisor and mark off the same number in the dividend as shown in the example.

	1 7 9 5	
5	$ \begin{array}{r} 8975 \\ -5 \\ \hline 39 \\ -35 \\ \hline 47 \\ -45 \\ \hline 25 \\ -25 \\ \hline 00 \end{array} $	How many 5s are in 8? → 1 How many 5s are in 39? → 7 How many 5s are in 47? → 9 How many 5s are in 25? → 5

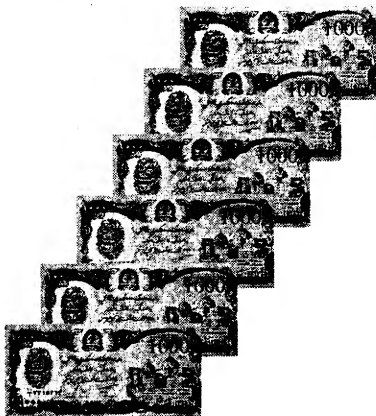
Practice

1. Solve

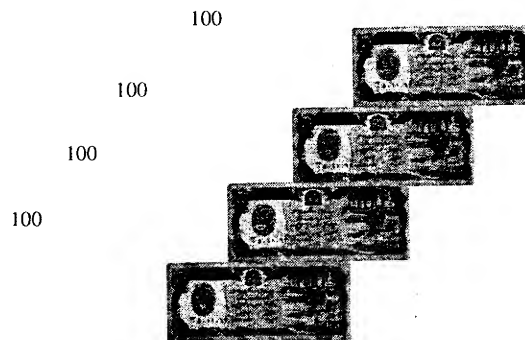
a.
$$\begin{array}{r}
 7 \overline{) 7896}
 \end{array}$$

b.
$$\begin{array}{r}
 8 \overline{) 9768}
 \end{array}$$

2. Solve



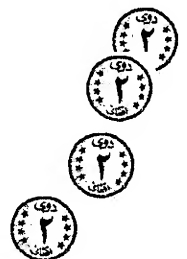
6000



400



40



8

6,448 Afghani is divided among 4 children. Find out the share of each child?

$$\begin{array}{r}
 4 \overline{) 6448}
 \end{array}$$

Objective : Divide 5 digit numbers by 1 digit with no zeros and no remainder .

Study

A chicken farm has 48,496 chickens . This farm has 4 equal spaces.

How many chickens can stay in each space?

Total number of chickens (dividend) = 48,496

Number of spaces (divisor) = 4

We count the divisor and mark off the same number in the dividend .

	1 2 1 2 4	
4	4 8 4 9 6	How many 4s are in 4
	4	1
	0 8	How many 4s are in 8
	8	2
	0 4	How many 4s are in 4
	4	1
	0 0 9	How many 4s are in 9
	8	2
	1 6	How many 4s are in 16
	1 6	4
	0 0	

$$48,496 \div 4 = 12,124 \text{ and no remainder}$$

Practice

1. Divide

a.

$$\underline{\quad} 2 \overline{) 42842}$$

b.

$$\underline{\quad} 3 \overline{) 36963}$$

c.

$$\underline{\quad} 4 \overline{) 48484}$$

d.

$$\underline{\quad} 3 \overline{) 96363}$$

2, Divide.

a. $44,848 \div 4 =$

b. $28,424 \div 2 =$

c. $96,363 \div 3 =$

d. $55,555 \div 5 =$

e. $82,442 \div 2 =$

f. $88,448 \div 3 =$

g. $69,633 \div 3 =$

3. 4 trucks can carry a total of 84,848 bricks . How many bricks can each truck carry ?

4. In Badakhshan province there are 96,369 children in schools. If a third of the children are girls. How many girls are there?

Objective: Divide 4 digit numbers by one digit with zeros and remainder.

Study

Akram packed 1394 biscuits into packets of 7 each. How many packets did he make and how many biscuits were left over ?

$$\begin{array}{r}
 0184 \\
 7 \overline{) 1394} \\
 \underline{0} \\
 13 \\
 \underline{-7} \\
 59 \\
 \underline{56} \\
 34 \\
 \underline{28} \\
 6
 \end{array}$$

We look at the divisor and choose an equal number from the dividend as shown.

How many 7s are in 1

0

How many 7s are in 13

1

How many 7s are in 59

8

How many 7s are in 34

4

6 are left over

1394 $\div$ 7 = 184 packets with 6 biscuits left over.

The number left over is called the remainder . The remainder should always be less than the number by which we divide, or the divisor .

Practice

1. Divide

a.

$$3 \overline{) 2749}$$

b.

$$5 \overline{) 3248}$$

c.

$$6 \overline{) 5023}$$

d.

$$5 \overline{) 4702}$$

1. A shop has the following items

Item	Price
5 air pots	4,679 Afs
6 meal services	5,386 Afs
7 tea services	3,427 Afs
8 rice dishes	7,149 Afs
9 buckets	1,669 Afs

- Find the price of 1 air pot. Show the remainder
- Find the price of 1 meal service. Show the remainder.
- Find the price of 1 tea service and show the remainder.
- Find the price of 1 rice dish and show the remainder.
- Find the price of 1 bucket and show the remainder.

Word problems:

- Zarina has 1,259 Afs. to buy flour. If the price of 1kg flour is 9 Afs. How many kgs of flour can she buy?
- The principal of school wants to give text books to his students. He has 7,895 textbooks. If he gives 8 textbooks to each student. How many students will receive books?

Objective : Divide 5 digit numbers by one digit with zeros and remainder.

Study

Akbar packed 48,693 pencils into packets of 5 each. How many packets did he make and how many pencils were left over?

We look at the divisor and choose an equal number from the dividend as shown.
Example:

	0 9 7 3 8	
5	$ \begin{array}{r} 48693 \\ -0 \\ \hline 48 \\ -45 \\ \hline 36 \\ -35 \\ \hline 19 \\ -15 \\ \hline 43 \\ -40 \\ \hline 3 \end{array} $	How many 5s are in 4 ? 0 How many 5s are in 48 ? 9 How many 5s are in 36 ? 7 How many 5s are in 19 ? 3 How many 5s are in 43 ? 8

48,693 $\div$ 5 = 9,738 packets and a remainder of 3 pencils .

Practice

1. Divide

a.

$$6 \overline{) 53475}$$

b.

$$5 \overline{) 44673}$$

Word problems.

3. Fill in the table by reading the price of each item

- a. The price of 7 kg flour is one hundred and thirty thousand and five hundred Afghanis.
- b. The price of one kg tea is one hundred and twenty thousand and three hundred Afghanis.
- c. The price of 7 kg sugar is one hundred and forty three thousand and fifty Afghanis.
- d. The price of 7 kg meat is four hundred and ninety thousand, two hundred and sixty Afghanis.

Item	Quantity	Price
Flour	7 kg	
Tea	1 kg	
Sugar	7 kg	
Meat	7 kg	

4. Write the missing numbers:

Examples: 86890 , 86,891

588,399, 588,400

- | | |
|--------------|-------------|
| a. , 182,091 | h. 597,059, |
| b. , 950,621 | i. 697,059, |
| c. , 370,490 | j. 299,099, |
| d. , 560,081 | k. 170,909, |
| e. , 780,089 | l. 980,109, |
| f. , 100,000 | m. 385,299, |
| g. , 168,510 | |

2. A department store has prepared the list of some of its goods . The quantity and the total cost is given in the following table . Copy the table,find the price of each item and write it in the corresponding space .

Number	Quantity	Total price	Quotient	Remainder
a.	7 bicycles	68,456		
b.	8 tape recorders	81,596		
c.	9 chairs	99,875		
d.	6 watches	87,124		
e.	5 briefcases	98,542		

- a. Find the price of one bicycle show the remainder.

$$\begin{array}{r} 7 \overline{) 68456} \end{array}$$

- b. Find the price of one tape recorder show the remainder.

$$\begin{array}{r} 8 \overline{) 81596} \end{array}$$

- c. Find the price of one chair show the remainder.

$$\begin{array}{r} 9 \overline{) 99875} \end{array}$$

- d. Find the price of one watch show the remainder.

$$\begin{array}{r} 6 \overline{) 87124} \end{array}$$

- e. Find the price of one briefcase show the remainder.

$$\begin{array}{r} 5 \overline{) 98542} \end{array}$$

2. A humanitarian organization distributed 65,323 Notebooks to 6 classes of a school in Kabul City. Find out the number of notebooks distributed to each class.
3. Five people jointly organized some business. Their total profit was 62,048 Afs. Find out the amount of their individual profit.

Objective: Review division of 4 and 5 digit numbers by one digit with and without zeros and remainder.

Study

A De-mining agency has reported the existence of 10,050 mines in Kabul City. 6 teams of De-miners are needed to clear these mines in one month. If each team clears an equal number, find out how many mines each team will clear.

Divide as follows:

$$\begin{array}{r}
 01675 \\
 6 \overline{) 10050} \\
 \underline{-0} \\
 10 \\
 \underline{-6} \\
 40 \\
 \underline{-36} \\
 45 \\
 \underline{-42} \\
 30 \\
 \underline{-30} \\
 00
 \end{array}$$

We look at the divisor and choose an equal number from the dividend as shown.

Since there are no 6s in 1 we put 0 in the quotient.

How many 6s are in 10? There are 1. We put 1 in the quotient.

How many 6s are in 40? There are 6. We put 6 in the quotient.

How many 6s are in 45? There are 7. We put 7 in the quotient.

How many 6s are in 30? There are 5. We put 5 in the quotient.

The answer is 1675 mines.

Practice

- Copy and complete the division table.

Dividend		Divisor		Quotient	Remainder
589		7	=		
588		8	=		
3456		3	=		
6887		9	=		
9865		8	=		
20970		6	=		
39308		9	=		

2. Choose the correct answer. Write a, b, c, or d

1) $948 \div 4 =$

- a) 236
- b) 237
- c) 232
- d) 234

2) $9864 \div 8 =$

- a) 1237
- b) 1234
- c) 1233
- d) 1208

3. Solve the following puzzle:

Divide the following numbers. Find each answer in the box below. Then write the related word. See if the sentences are meaningful.

$\underline{7} \overline{) 4634}$

Now.

$\underline{6} \overline{) 6042}$

To

$\underline{5} \overline{) 3200}$

School

$\underline{9} \overline{) 1881}$

Go

$\underline{7} \overline{) 3563}$

Every

$\underline{8} \overline{) 6488}$

Day.

$\underline{6} \overline{) 2826}$

He

$\underline{5} \overline{) 3000}$

Is

$\underline{4} \overline{) 8532}$

Student

$\underline{3} \overline{) 8532}$

a

$\underline{9} \overline{) 8532}$

Happy

$\underline{4} \overline{) 3284}$

Likes

Ahmad	821	1007	209	1007	640	509
811	471	600	2844	948	213	662 Now.

4. Kabir bought seven books for Rs 16,205. Find the price of one book.

$16205 \div 7$

5. 19,290 students visited the National Museum during 6 days. If the number of visitors of each day was equal, find out the number of visitors during one day?

6. UNICEF is planning to vaccinate 31,140 children during a 9 day campaign. Find the number of children to vaccinated during one day.

Objective: Assess division of 4 or 5 digit numbers by one digit with and without zeros and remainder.

1. Divide

a.
$$\begin{array}{r} 5 \overline{) 9875} \end{array}$$

b.
$$\begin{array}{r} 6 \overline{) 6744} \end{array}$$

c.
$$\begin{array}{r} 8 \overline{) 98672} \end{array}$$

d.
$$\begin{array}{r} 3 \overline{) 43962} \end{array}$$

2. Divide and find the remainder

a.
$$\begin{array}{r} 5 \overline{) 4567} \end{array}$$

b.
$$\begin{array}{r} 4 \overline{) 3467} \end{array}$$

c.
$$\begin{array}{r} 7 \overline{) 67873} \end{array}$$

e.
$$\begin{array}{r} 6 \overline{) 54693} \end{array}$$

3. Zemarak has 98,978 liters of oil to sell. If he sells equal amounts to 8 different traders, how many liters will each one get?

$$\begin{array}{r} 8 \overline{) 98976} \end{array}$$

4. The headmistress of a school wants to give 9 notebooks to each student. She has 79,873 notebooks. How many students will receive notebooks?

$$\begin{array}{r} 9 \overline{) 79873} \end{array}$$

Objective: Division by 10, 100, and 1000 with no remainder.

Study

When we divide a number by 10, 100 or 1000, we count the number of zeros in the divisor and cross out the same number of zeros from the dividend.

Example: $4800 \cancel{0} \cancel{1} \cancel{0} = 4800$

$480 \cancel{0} \cancel{0} \cancel{1} \cancel{0} \cancel{0} = 480$

$480 \cancel{0} \cancel{0} \cancel{0} \cancel{1} \cancel{0} \cancel{0} \cancel{0} = 48$

	10 Thousand	Thousand	Hundred	Tens	Units	
4 8 0 0 0 10		4	8	0	0	→ = 4800
4 8 0 0 0 100			4	8	0	→ = 480
4 8 0 0 0 1000				4	8	→ = 48

Practice

1. Divide

a. $54800 \div 10 =$

e. $895000 \div 100 =$

b. $892000 \div 100 =$

f. $895000 \div 100 =$

c. $9890000 \div 1000 =$

g. $6740000 \div 1000 =$

d. $687500 \div 10 =$

h. $450000 \div 1000 =$

2. A merchant made a profit of 48,000 Afs in 10 months find the amount of profit he made in 1 month.

3. A family's monthly expenditure is 3,600 Afs. Find out the amount of their daily expenditure when the month has 30 days.

Objective : Divide 4 and 5 digits by 10, 100 and 1000 with remainder.

Study

One truck can move 100 trees. How many trucks are needed to move 4,356 trees? We look at the divisor and choose an equal number from the dividend as shown .

$$\begin{array}{r}
 43 \\
 100 \overline{) 4356} \\
 \underline{-400} \\
 356 \\
 \underline{-300} \\
 56
 \end{array}$$

4,356 $\div$ 100 = 43 trucks, remainder 56 trees.

Practice

1. Complete the table.

6 4 8 5		10	=		r	
9 8 7 0 3		100	=		r	
8 4 0 2 1		100	=		r	
9 7 2 3		10	=		r	
6 5 8 2 1		100	=		r	

2. Ahmad wants to make a big bookcase for 4,895 books at his school. He wants the bookcase to have 10 equal shelves. How many books can he put on each shelf?

$$10 \overline{) 4895}$$

3. The UN wants to distribute 48,675Kg wheat among 100 schools. Find the share of each school.
4. The education Department of Kabul wants to distribute 9,879 pencils among 1000 poor students. Find the number of pencils each student will get also the number of pencils remaining.

Objective: Divide 3, 4, and 5 digits by 2 digits without zeros and remainder

Study

When we divide a 3, 4, or 5 digit number by 2 digits, we look at the divisor and choose an equal number of digits from the dividend.

Example :

We have 2,304 students. We want to divide them into 18 groups.
Find out the number of students in each group?

$$\begin{array}{r}
 128 \\
 18 \overline{) 2304} \\
 \underline{-18} \\
 50 \\
 \underline{-36} \\
 144 \\
 \underline{144} \\
 000
 \end{array}$$

There are 2 digits in the divisor choose
2 digits in the dividend.

How many 18s are in 23

1

How many 18s are in 50

2

How many 18 in 144

8

$$2,304 \div 18 = 128 \text{ Students}$$

Practice

1. Divide.

a. $27 \overline{) 79515}$

$$79515 \div 27 =$$

b. $24 \overline{) 67080}$

$$67080 \div 24 =$$

2. Puzzle

Follow the directions to find the year the bicycle was invented.

Divide the numbers as given below.

Match the answers with those given at the right . The number left over is the year the bicycle was invented.

a. $83,085 \div 29 =$

b. $45,425 \div 23 =$

c. $71,874 \div 33 =$

d. $55,352 \div 17 =$

e. $97,615 \div 35 =$

f. $84,672 \div 54 =$

g. $87,880 \div 65 =$

1 9 7 5
2 1 7 8
2 8 6 5
1 3 5 2
2 7 8 9
1 5 6 8
1 8 3 9
3 2 5 6

The bicycle was invented in

3. A company manufactured 71,804 bicycles in 28 days. Find out the number of bicycles manufactured in 1 day?

$$\begin{array}{r} 28 \overline{) 71904} \end{array}$$

$71804 \div 28 =$

Objective: Divide 4 and 5 digit numbers by 2 digits with zero and remainder.

Study

The Forest Department planted 15,648 trees to replace those trees that had been destroyed. They planted 84 trees in each row. How many complete rows of trees did they plant ?

$$\begin{array}{r}
 0186 \\
 84 \overline{) 15648} \\
 \underline{0} \\
 156 \\
 \underline{84} \\
 724 \\
 \underline{672} \\
 528 \\
 \underline{504} \\
 24
 \end{array}$$

We look at the divisor and choose an equal number from the dividend as shown.

How many 84s are in 15
0

How many 84s are in 156
1

How many 84s are in 724
8

How many 84s are in 528
6

1,568 84 = 186 rows of trees, remainder 24 trees.

Practice

1. Complete the table.

1	1,154		12	=		R	
2	2,785		32	=		R	
3	3,898		41	=		R	
4	15,872		65	=		R	
5	18,765		86	=		R	

2. A forest worker can plant 96 trees in one day . How many wokers are needed to plant 18734 trees in one day ?
3. 31 packets of sweets contain a total of 2,283 sweets. How many sweets are in each packet?
4. If the dividend is 1039

The answer is 49

The remainder is 10

Find the divisor

Objective: Add 5 and 6 digit numbers without carrying.

Study

When we add large numbers, we place the ones, the tens, the hundreds, the thousands, and the ten thousands under each other and then we add:
For example:

We add ones	Add tens	Add hundreds	Add thousands	Add ten thousands
$\begin{array}{r} 54321 \\ + 30658 \\ \hline \end{array}$	$\begin{array}{r} 54321 \\ + 30658 \\ \hline \end{array}$	$\begin{array}{r} 54321 \\ + 30658 \\ \hline \end{array}$	$\begin{array}{r} 54321 \\ + 30658 \\ \hline \end{array}$	$\begin{array}{r} 54321 \\ + 30658 \\ \hline \end{array}$

Practice

- Nasima had 40,625 Afghanis. Her sister gave her 38353 Afghanis. How much money does Nasima have now?
- The population of Qanduz city is 343,058 people. A large group of 152,241 people came from Badakhshan to Qanduz. What is the population of Qanduz now?
- Copy and find the missing numbers.

203542	+	124013	=	
				+
				102231
				=
	=	230102	+	
+				
120101				
=				
+				
120010	=			

Objective : Review division of 2 to 5 digit numbers by 2 digits with and without remainder.

Study

To divide a number by 10, 100, or 1000, we count the number of zeros in the divisor and cross out the same number of zeros from the dividend.

Examples

280	$10 = 28$
5100	$100 = 51$
2000	$1000 = 2$

If 1,567 soldiers were standing in 12 rows how many soldiers were there in each row ?

$$\begin{array}{r}
 130 \\
 12 \overline{) 1567} \\
 \underline{-12} \\
 36 \\
 \underline{-36} \\
 07 \\
 \underline{0} \\
 7
 \end{array}$$

How many 12s are in 15 ?

1

How many 12s are in 36 ?

3

How many 12s are in 7?

0

1,567 $12 = 130$ soldiers in each row 7 soldiers remainder

Practice

1. Solve the problems.

a. $70 = 7$

b. $280 \quad 10 =$

c. $200 = 2$

d. $3,200 \quad 100 =$

e. $32,000 \quad 1000 =$

f. $500 = 50$

g. $2,100 \quad 100 =$

h. $3,000 = 3$

i. $5,010 \quad 10 =$

j. $3,200 = 320$

2. Divide.

a.

$$\begin{array}{r} 15 \overline{) 1830} \end{array}$$

b.

$$\begin{array}{r} 35 \overline{) 7420} \end{array}$$

c.

$$\begin{array}{r} 92 \overline{) 98532} \end{array}$$

d.

$$\begin{array}{r} 85 \overline{) 95625} \end{array}$$

3. Divide and find the remainder

a.

$$\begin{array}{r} 25 \overline{) 2623} \end{array}$$

b.

$$\begin{array}{r} 77 \overline{) 8253} \end{array}$$

c.

$$\begin{array}{r} 99 \overline{) 89356} \end{array}$$

d.

$$\begin{array}{r} 65 \overline{) 71231} \end{array}$$

4. Sayed runs 4,960 meters in 31 days. How many meters does he run in one day ?

$$\begin{array}{r} 31 \overline{) 4960} \end{array}$$

5. There are 16,632 hours in 99 weeks. How many hours are there in one week ?

$$\begin{array}{r} 99 \overline{) 16632} \end{array}$$

6. 81 Children share the cost of a holiday picnic. If the picnic costs 89,359 Afghanis, how much must each child pay and how much money is left over?

$$\begin{array}{r} 81 \overline{) 89359} \end{array}$$

Objective: Assess division of 2 to 5 digit numbers by 2 digits with and without remainder.

1. Complete the problems.

a. $2100 \div 10 = 210$

b. $8200 \div 100 = 82$

c. $25,000 \div 100 =$

d. $24,000 \div 10 =$

e. $55,000 \div 100 = 550$

f. $12,500 \div 1000 =$

g. $8,500 \div 100 =$

h. $1,230 \div 10 =$

2. Divide

a.
$$\begin{array}{r} 25 \overline{) 3550} \end{array}$$

b.
$$\begin{array}{r} 92 \overline{) 98154} \end{array}$$

3. Divide and find the remainder

a.
$$\begin{array}{r} 52 \overline{) 5632} \end{array}$$

b.
$$\begin{array}{r} 81 \overline{) 8212} \end{array}$$

c.
$$\begin{array}{r} 91 \overline{) 92312} \end{array}$$

d.
$$\begin{array}{r} 72 \overline{) 75321} \end{array}$$

5. From Logar, delicious apples are packed in boxes of 35 each. How many boxes will be required to pack 2,380 apples ?

$$\begin{array}{r} 35 \overline{) 2380} \end{array}$$

6. A school notebook contains 75 sheets. How many notebooks can we make from 26,250 sheets and how many sheets will remain ?

$$\begin{array}{r} 75 \overline{) 26250} \end{array}$$

Objective: Divide 4 and 5 digit numbers by 3 digit numbers without remainder.

Study

There are 11,408 cows on a farm. The farm owner wants to divide them into 124 equal groups for feeding. How many cows will be in each group?

093

$$\begin{array}{r}
 124 \overline{) 11532} \\
 \underline{0} \\
 1153 \\
 \underline{1116} \\
 372 \\
 \underline{372} \\
 000
 \end{array}$$

We look at the divisor and choose an equal number from the dividend as shown.

How many 124s are in 115?
0

How many 124s are in 1153?
9

How many 124s are in 372?
3

$$11532 \div 124 = 93 \text{ groups}$$

Practice

1. Divide

a)
$$113 \overline{) 2825}$$

b)
$$123 \overline{) 9594}$$

c)
$$371 \overline{) 24115}$$

d)
$$315 \overline{) 14175}$$

2. A rich man wants to divide 45,046 Afs between 143 poor men. How much money will each poor man receive ?
3. The principal of a school wants to buy pencils for the students. The price of each pencil is 271 Afs. How many pencils can the principal buy for 39,295 Afs ?

Objective: Divide 4 - 6 digit numbers by 3 digits with remainder.

Study

When we divide a 4 digit or 6 digit number by a 3 digit number, we look at the divisor and choose the same number of digits in the dividend as shown.

Example

$$\begin{array}{r}
 19 \\
 492 \overline{) 9359} \\
 \underline{- 492} \\
 4439 \\
 \underline{- 4428} \\
 0011
 \end{array}$$

How many 492s in 934 ?
1

How many 492s in 4428 ?
9

$$9348 \div 492 = 19, R = 11$$

Practice

1. Divide

a.

$$382 \overline{) 47119}$$

$$47119 \div 382 = \quad R =$$

b.

$$538 \overline{) 142783}$$

$$142783 \div 538 = \quad R =$$

2. Complete the table.

Dividend	Divide	Divisor	=	Answer	Remainder
97,656		260	=		
108,922		256	=		
144,987		277	=		
105,696		337	=		
75,193		165	=		

3. The department store sold 111,960 shirts, 67,320 pairs of shoes, and 284,760 pairs of socks during 360 days that it was open. Find out the numbers of each item that was sold during one day?

a.
$$\begin{array}{r} 360 \overline{) 111960} \end{array}$$
 $111960 \div 360 =$ shirts

b.
$$\begin{array}{r} 360 \overline{) 67320} \end{array}$$
 $67320 \div 360 =$ pairs of shoes

c.
$$\begin{array}{r} 360 \overline{) 284760} \end{array}$$
 $284760 \div 360 =$ pairs of socks

Objective: Review division of 4,5 and 6 digit numbers by 3 digits with and without remainder.

Study

A crate contains 144 oranges . How many crates are needed to pack 17,712 oranges? We look at the divisor and choose an equal number from the dividend as shown.

$$\begin{array}{r}
 123 \\
 144 \overline{) 17712} \\
 \underline{144} \\
 331 \\
 \underline{-288} \\
 432 \\
 \underline{-432} \\
 000
 \end{array}$$

How many 144s are in 177
1

How many 144s are in 331
2

How many 144s are in 432
3

$$17712 \div 144 = 123 \text{ crates}$$

Practice

1. Divide

a.

$$321 \overline{) 9309}$$

b.

$$211 \overline{) 12449}$$

c.

$$232 \overline{) 752840}$$

2. Divide and find the remainder

a.

$$211 \overline{) 4439}$$

b.

$$123 \overline{) 10949}$$

c.

$$444 \overline{) 547099}$$

3. Each section in Nangarhar high school will receive 119 notebooks. If there are 2,975 notebooks to be distributed, how many sections are in the school ?

$$119 \overline{) 2975}$$

4. A driver drives 119 km every day. If he has driven 23,205 km for how many days did he drive ?

Objective: Assess division of 4, 5, and 6 digit numbers by 3 digits with and without remainder.

1. Divide

a.

$$\begin{array}{r} 101 \overline{) 1212} \end{array}$$

b.

$$\begin{array}{r} 121 \overline{) 11858} \end{array}$$

c)

$$\begin{array}{r} 912 \overline{) 719568} \end{array}$$

2. Divide and find the remainder

a.

$$\begin{array}{r} 410 \overline{) 4993} \end{array}$$

b.

$$\begin{array}{r} 458 \overline{) 68799} \end{array}$$

c)

$$\begin{array}{r} 627 \overline{) 471569} \end{array}$$

3. A student needs 410 Afghanis for travel to school. How many students can travel for 4,920 Afs ?

$$\begin{array}{r} 410 \overline{) 4920} \end{array}$$

4. Naveed receives 489 Afghanis from his mother each time he cleans up his bedroom. How many times must he clean his room to save up 11,736 Afs?

Objective: Divide 5, 6 and 7 digit numbers by 4 digits without remainder.

Study

Sher Khan sells 1262 kg of sugar in one week. How many weeks will it take to sell 15,144 kg of sugar? We look at the divisor and choose an equal number from the dividend as shown.

$$\begin{array}{r}
 12 \\
 1262 \overline{) 15144} \\
 \underline{-1262} \quad \leftarrow 1 \quad \text{How many 1262s are in 1514} \\
 2524 \quad \leftarrow 2 \quad \text{How many 1262s are in 2524} \\
 \underline{-2524} \\
 0000
 \end{array}$$

$$15,144 \div 1262 = 12 \text{ weeks}$$

Practice

1. Divide.

1,829,475		2325	=	
68,005		2345	=	
187,188		2463	=	
1,372,356		3492	=	
233,472		2432	=	
95,499		7423	=	

2. A shopkeeper bought 2,354 pencils which cost 1,617,198 Afs.
Find the price of 1 pencil ?

$$1,617,198 \div 2354 = \quad \text{Afs}$$

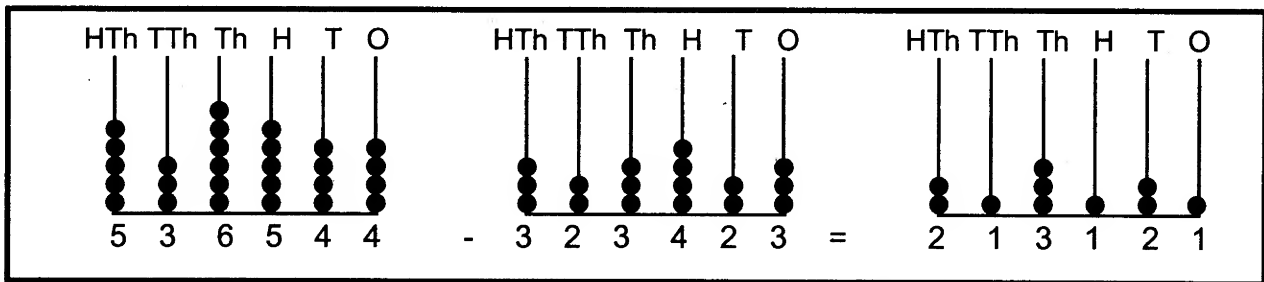
3. If the price of 1 eraser is 235 Afs, how many can we buy with 620,664 Afs ?

$$620.664 \div 235 = \quad \text{erasers}$$

4. A shopkeeper has 1,226,841 Afs. He wants to buy flour. If the price of 1 bag of flour is 1,243 Afs, how many bags of flour can he buy?

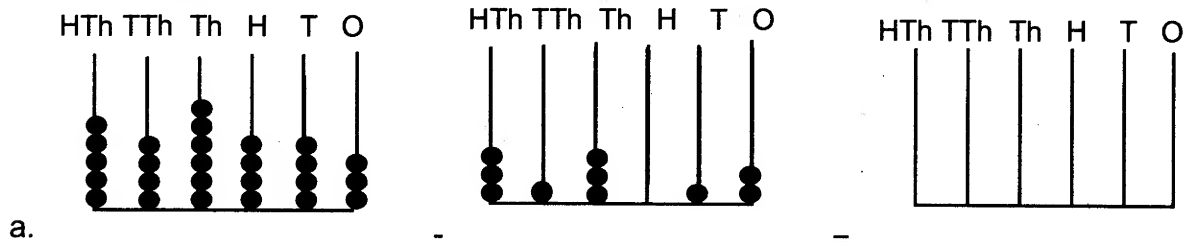
Objective: Review subtraction without borrowing.

Study

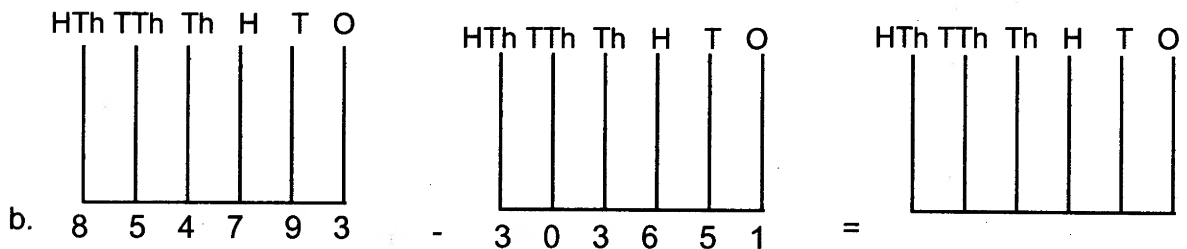


Practice

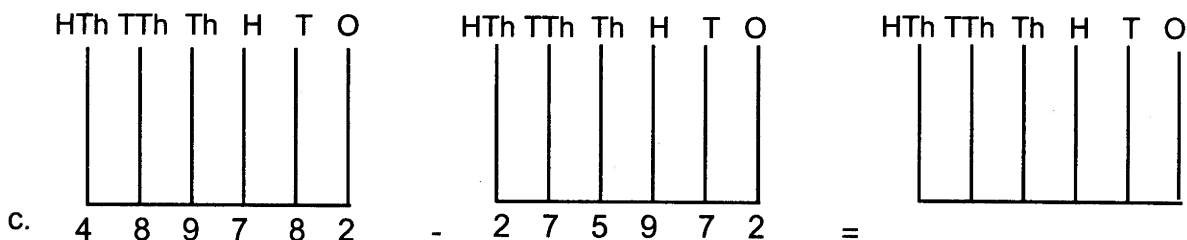
1. Solve the following



a.



b.



c.

Word problems.

2. The number of Afghan refugees in NWFP was 876,584 people in 1999. In January 2000, a large group of 253,163 Afghan refugees returned back to Afghanistan. How many Afghan refugees are now in NWFP?

8	7	6	5	8	4
-	2	5	3	1	6

3. Qandahar had 852,391 sheep. During the drought season 340,160 sheep died. How many sheep were left in Qandahar?

8	5	2	3	9	1
-	3	4	0	1	6

Objective: Divide 5 - 7 digit numbers by 4 digits with remainder.

Study

It costs 2,581 Afghanis for each student to go on a school picnic. If there are 1,873,899 Afghanis, how many students can go on the picnic and how much money will be left over? We look at the divisor and choose an equal number from the dividend as shown.

	0 7 2 6	
2581	1 8 7 3 8 9 9	How many 2581s are in 1873 ?
	- 0 0 0 0	0
	1 8 7 3 8	How many 2581s are in 18738 ?
	1 8 0 6 7	7
	6 7 1 9	How many 2581s are in 6719 ?
	5 1 6 2	2
	1 5 5 7 9	How many 2581 are in 15579 ?
	1 5 4 8 6	6
	0 0 0 9 3	

1,873,899 ÷ 2,581 = 726 Students and 93 Afs remain

Practice

1. Divide

a.

$$1011 \overline{) 71799}$$

b.

$$1254 \overline{) 66499}$$

c.

$$4562 \overline{) 1920668}$$

2. If 4,568 boys share 237,536 Afghanis equally, how much will each get and how many Afghanis will be left over ?

$$4568 \overline{) 237536}$$

3. Zalmai picks 71,399 apples from a garden. He packs 8,919 apples in to one cart. How many carts does he need to carry the apples, and how many will be left over ?

4. Golab has 50,407 bricks. He needs 2,653 bricks to build a wall. How many walls can he build and how many bricks are left over ?

Objective: Review division 5,6, and 7 digit numbers by 4 digits with and without remainder.

Study

The administration of Mariam s High School has 949,858 Afs and wants to buy stationery for students. The price of the stationery is 12,374 Afs for each students. How many students will receive stationery.

We look at the divisor and choose an equal number from the dividend.

		76	
12374	949858		How many 12,374 are in 94985?
	96618	←	7
	83678		How many 12,374 are in 83778?
	74244	←	6
	9434		

$$949,858 \div 12,374 = 76 \text{ students. } R = 9,534 \text{ Afs}$$

When we want to check the answers in a division, we say that the
dividend = (answer x divisor) + remainder

In the above example:

dividend = 949,858 Afs

answer = 76

dividend = 12,374

remainder = 9,534

$$949,858 = (76 \times 12,374) + 9,434$$

dividend = 949,858

Practice

1. Divide and check your answer

a.

$$\begin{array}{r} 1243 \overline{) 4985} \end{array}$$

b.

$$\begin{array}{r} 1452 \overline{) 9527} \end{array}$$

c.

$$\begin{array}{r} 2745 \overline{) 25763} \end{array}$$

d.

$$\begin{array}{r} 3852 \overline{) 93874} \end{array}$$

2. In a flour market there are 1,452 trucks to carry 25,985 tons of flour. How much flour will each truck carry ?

3. In a cotton store there are 359,873 tons of cotton. The storekeeper wants to transfer it in 2,891 rounds. How much cotton does he transfer in each round?

Objective: Assess division 5, 6 and 7 digit tnumbers by 4 digits with and without remainder.

1. Divide

a.

$$\begin{array}{r} 7891 \overline{) 94692} \end{array}$$

b.

$$\begin{array}{r} 7829 \overline{) 634149} \end{array}$$

c.

$$\begin{array}{r} 7896 \overline{) 7051128} \end{array}$$

d.

$$\begin{array}{r} 8965 \overline{) 17998} \end{array}$$

e.

$$\begin{array}{r} 8451 \overline{) 185989} \end{array}$$

f.

$$\begin{array}{r} 7789 \overline{) 1729289} \end{array}$$

2. 7,891 buses carry a total of 394,550 passengers. How many passengers are in each bus?

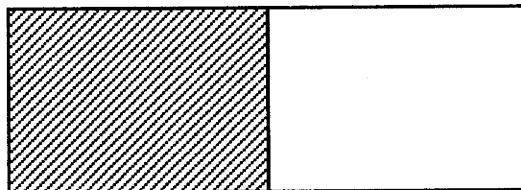
$$\begin{array}{r} 7891 \overline{) 394550} \end{array}$$

3. There are 2,994,003g flour to make cakes. It is made into 8,991 cakes. How many g of flour are used in each cake and how much is left over?

Objective: Review Fractions.

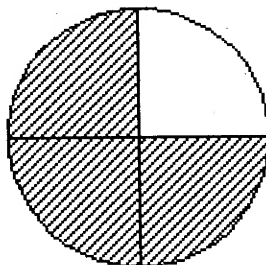
Study

The paper is divided into 2 equal parts. One of the two parts is shaded.
The shaded part shows the fraction $\frac{1}{2}$



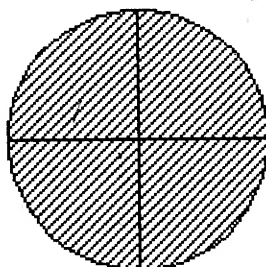
$$\frac{1}{2}$$

The circle is divided into 4 equal parts. Three of the four parts are shaded.
The shaded parts show the fraction $\frac{3}{4}$



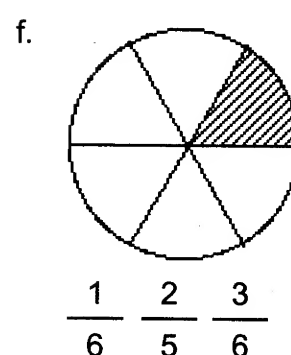
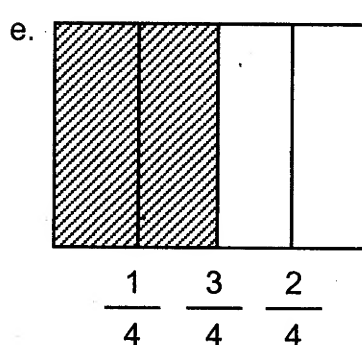
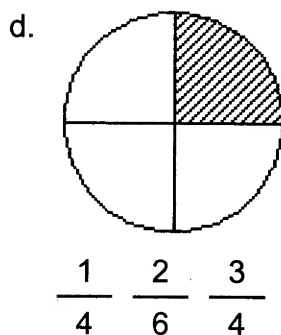
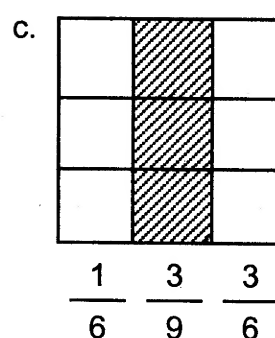
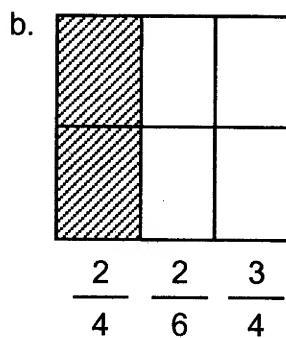
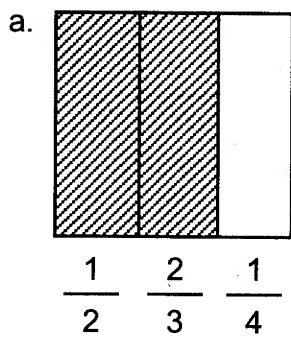
$$\frac{3}{4}$$

When all 4 parts are shaded then the fraction is 1 whole

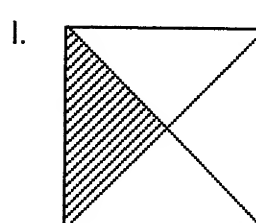
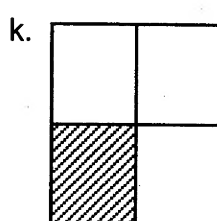
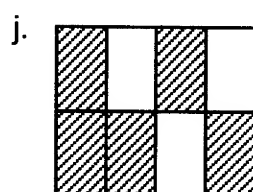
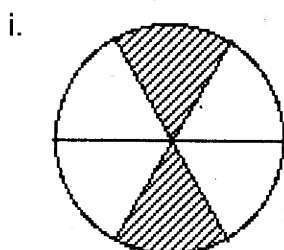
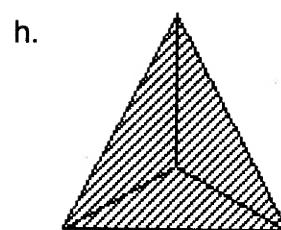
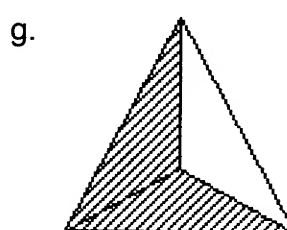
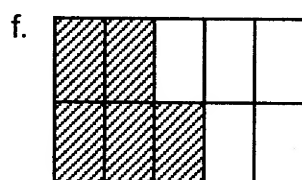
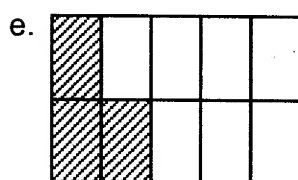
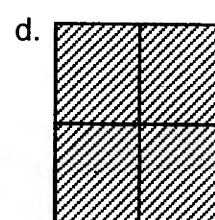
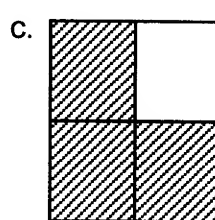
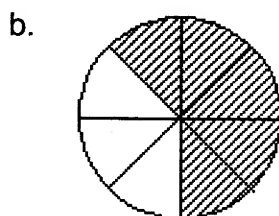
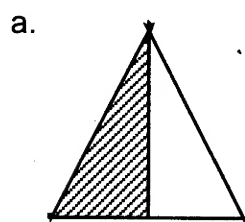


$$\frac{4}{4} = 1$$

1. Write the correct fraction



2. Write the fraction for the shaded part



Objective: Introduce proper fractions

Study

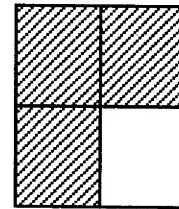
Look at the shape.

This figure is divided into 4 equal parts which form the denominator.

There are 3 shaded parts which form the numerator.

3 . . . Numerator

4 . . . Denominator



$$\frac{3}{4}$$

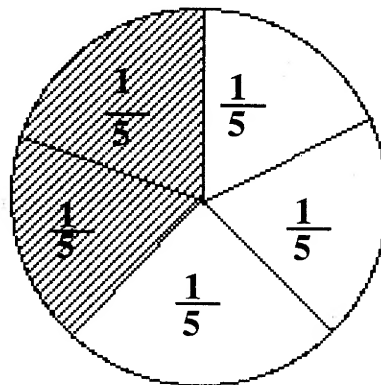
When the numerator is smaller than the denominator, we call the fraction a proper fraction.

Example

A watermelon was divided into 5 equal parts and Ahmed ate 2 of the five parts

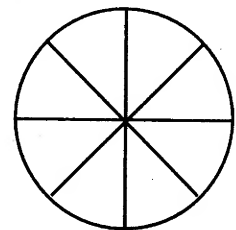
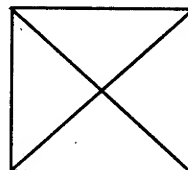
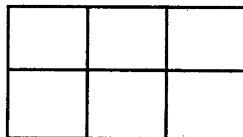
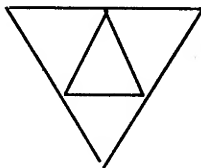
2 . . . Numerator

5 . . . Denominator



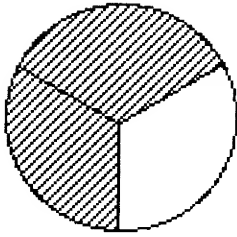
When the denominator is greater than the numerator, that fraction is called a proper or real fraction.

1. Look at the figures and write the denominator

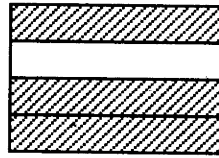


2. Look at the shaded parts. Write the numerator

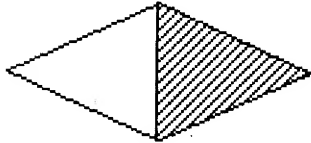
a.



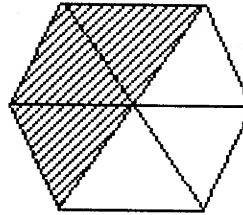
b.



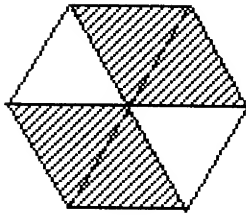
c.



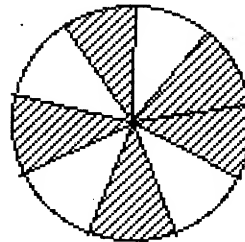
d.



e.

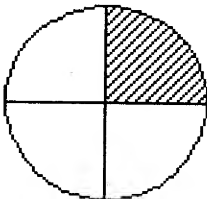


f.

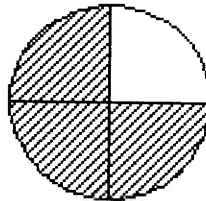


3. Write the fractions for the shaded parts :

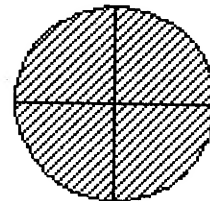
a.



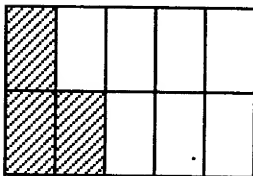
b.



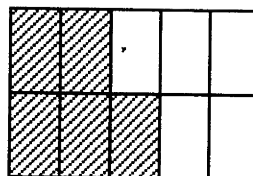
a.



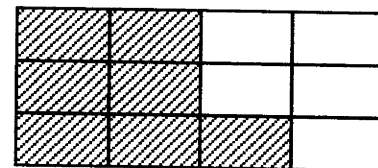
c.



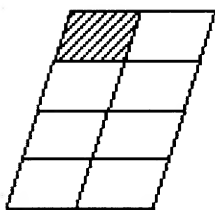
d.



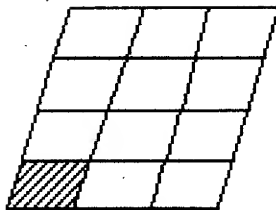
e.



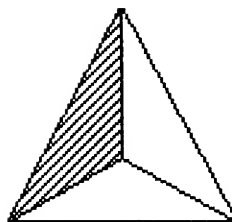
g.



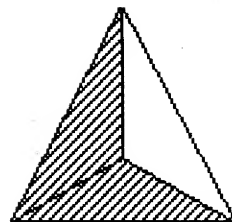
h.



i.



j.



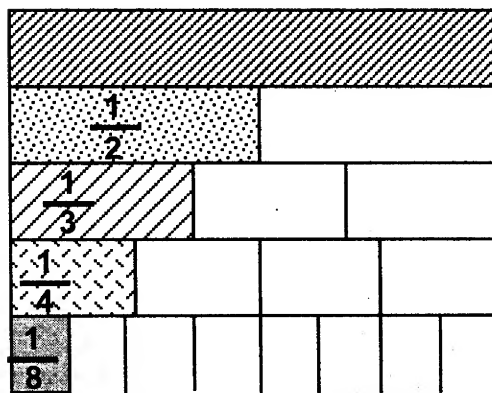
4) Use the picture to answer the questions:

a) How many $\frac{1}{2}$ are in 1 whole?

b) How many $\frac{1}{3}$ are in 1 whole?

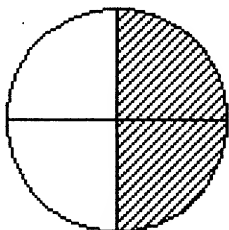
c) How many $\frac{1}{4}$ are in 1 whole?

d) How many $\frac{1}{8}$ are in 1 whole?

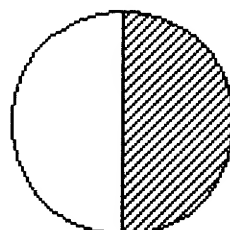


Objective: Reduce fractions to the lowest possible terms.

Study



$$\frac{2}{4}$$



$$\frac{1}{2}$$

$\frac{2}{4}$ can be reduced to $\frac{1}{2}$ by dividing the numerator and the denominator by the same number.

$$\frac{2}{4} \frac{2}{2} = \frac{1}{2} \quad \text{or} \quad \frac{1}{\cancel{2}}^2 = \frac{1}{2}$$

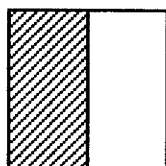
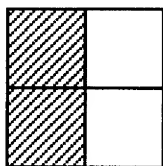
$$\frac{2}{4} \text{ is the same as } \frac{1}{2}$$

Note: this is sometimes called cancelling.

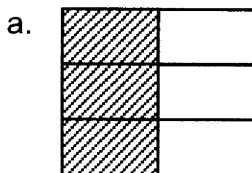
Practice

1. Reduce the fractions to the lowest possible terms.

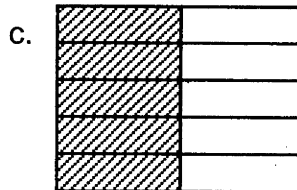
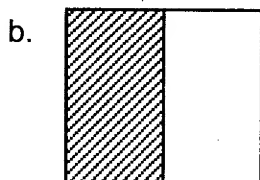
Follow the example



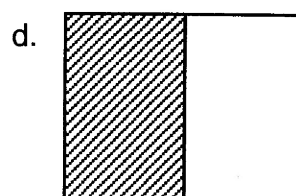
$$\frac{2}{4} \frac{2}{2} = \frac{1}{2}$$



$$\frac{3}{6} = \underline{\hspace{2cm}}$$



$$\frac{5}{10} = \underline{\hspace{2cm}}$$



Objective: Solve mixed problems of Addition & Subtraction.

Study

Sometimes we have to add and subtract simultaneously to solve some problems. For example, a group of 68580 students from Nangarher and a group of 31,317 students from Qandahar participated in the final exam. A total of 1,676 students failed in the exam. Find out the number of students that passed.

Total number of students: $68580 + 31317 = 99897$ students.

Passed students: $99897 - 1676 = 98221$ students

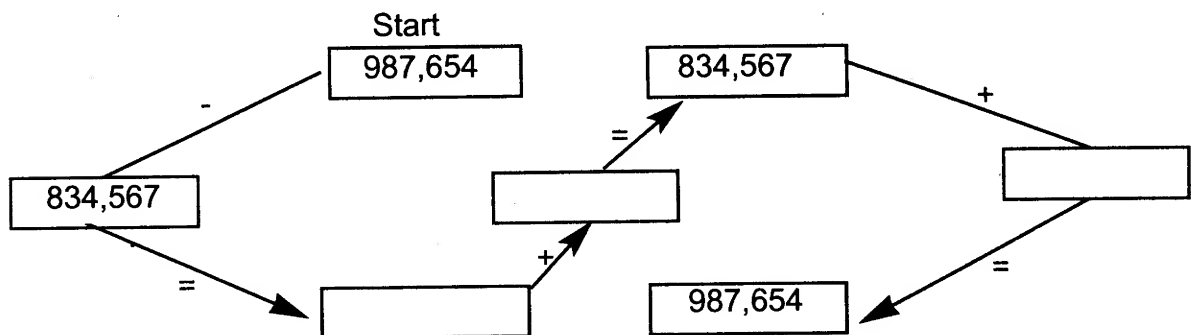
Practice

- Ahmad's monthly salary is 540,000 Afs and he gets 448,950 Afs. as the monthly rent of his shop. Ahmad pays 300,422 Afs. for the rent of his house. Find out his monthly savings?

Ahmad's income:

Ahmad's saving:

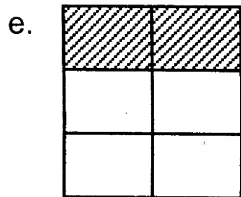
- Copy and find the missing numbers



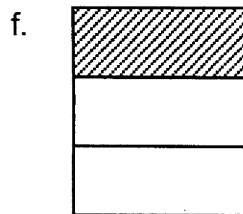
- Zalmai had 356,752 Afs. His father gave him 233,145 Afs. He paid 126,453 Afs. for his tuition. How much money does Zalmai have now?

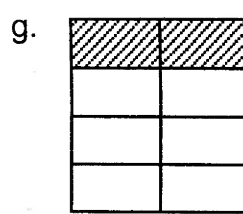
Zalmai's income:

Zalmai's savings:

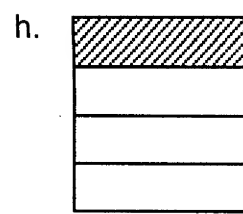


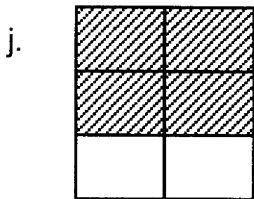
$$\frac{2}{6} =$$



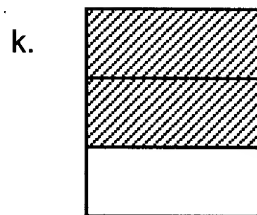


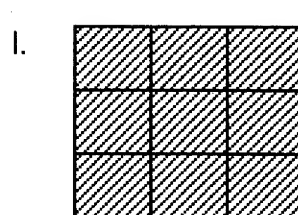
$$\frac{2}{6} =$$



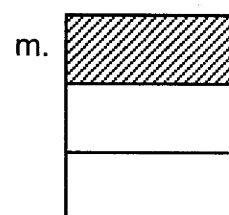


$$\frac{4}{6} =$$





$$\frac{6}{9} =$$



2. Reduce to lowest possible terms

a. $\frac{3}{6}$

b. $\frac{4}{6}$

c. $\frac{3}{12}$

d. $\frac{10}{15}$

e. $\frac{6}{9}$

f. $\frac{6}{15}$

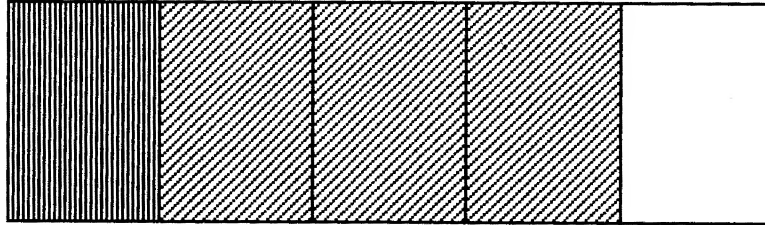
3. Habiba does $\frac{3}{9}$ of her homework, write the fraction of her homework that she has done in the lowest possible terms.

4. Students read $\frac{10}{15}$ of their text books. Write the fraction of their text books that the students read in lowest possible terms .

Objective: Add fractions with like denominators.

Study

Ahmad finished $\frac{1}{5}$ of his painting on Friday. He finished $\frac{3}{5}$ of his painting on Saturday. How much of the painting was finished by Saturday



1 fifth + 3 fifths = 4 fifths

$$\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$$

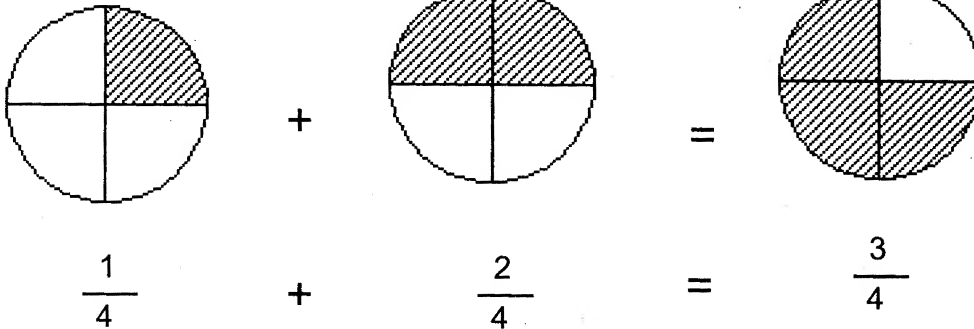
← parts shaded ← parts in all

In a fraction if the denominators are equal we add the numerators.

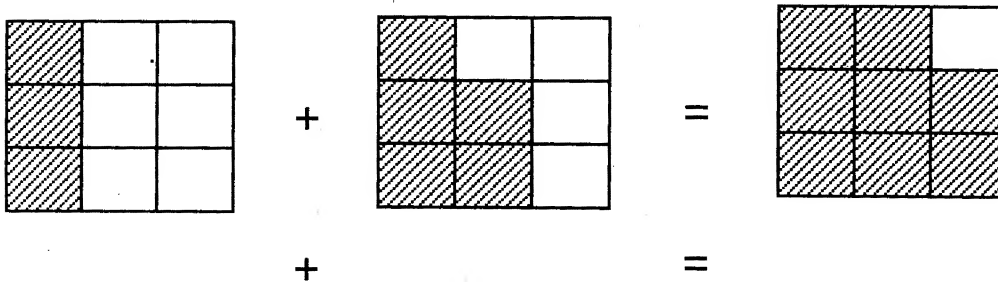
Practice

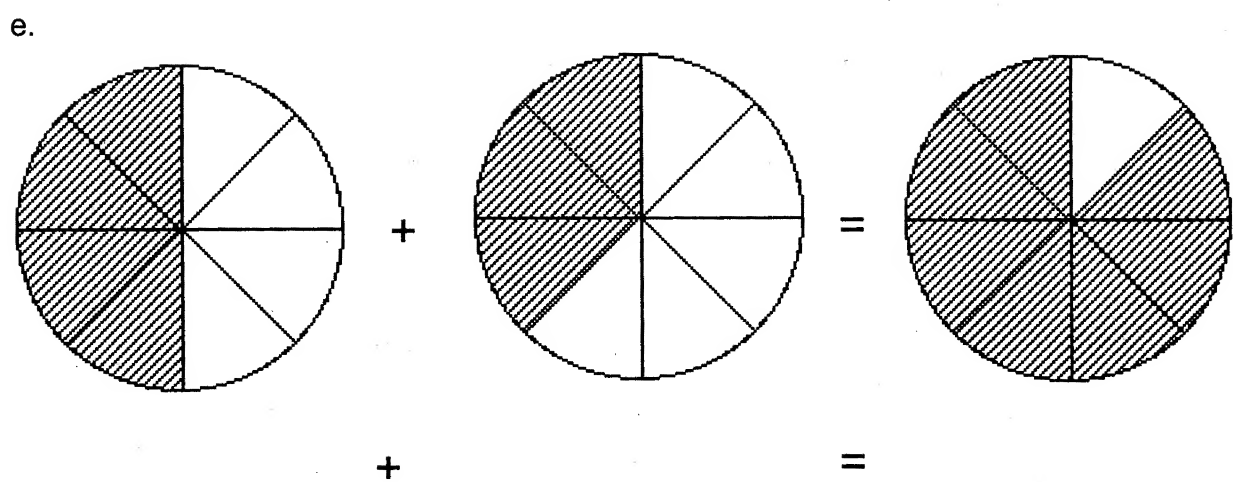
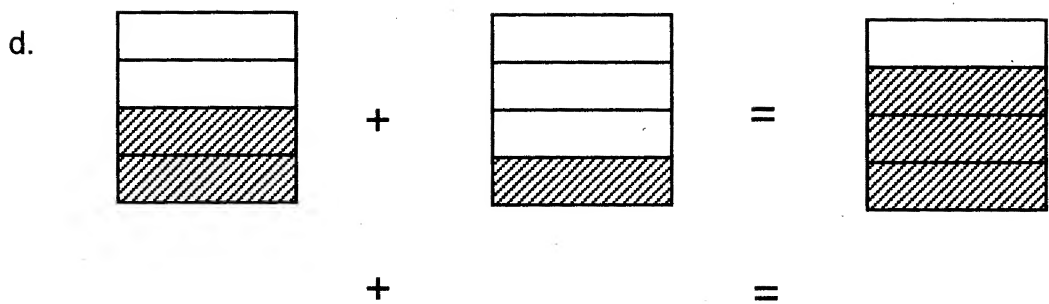
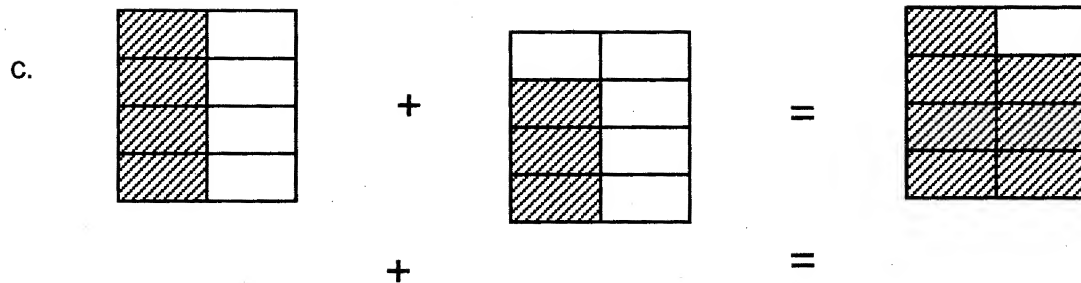
1. Write the fraction and add.
Follow the example :

a.



b.



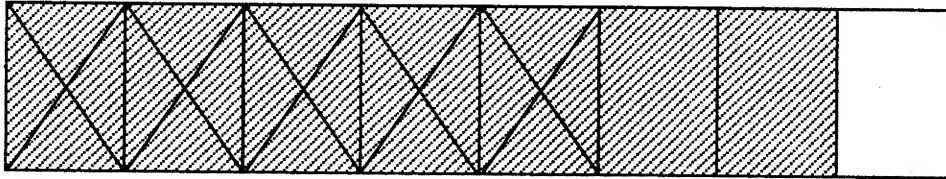


2. Nazia and Seraj planted part of their garden. They planted $\frac{2}{6}$ of the garden with beans and $\frac{3}{6}$ with peas. How much of the garden has been planted ?

Objective: Subtract fractions with like denominators.

Study

Quasim is cycling $\frac{7}{8}$ of a mile. He has already cycled $\frac{5}{8}$ of a mile. How much further does he have to go?



Seven eighths - five eighths = two eighths.

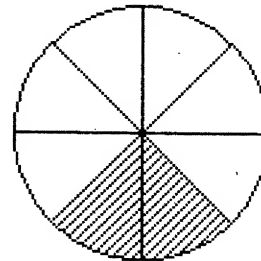
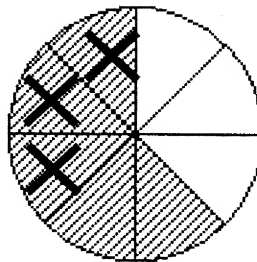
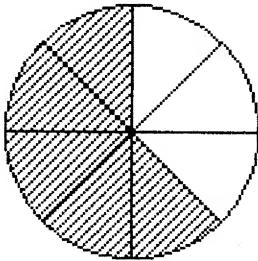
$$\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array} \quad \begin{array}{r} 8 \\ - 8 \\ \hline 8 \end{array} = \begin{array}{r} 2 \\ 8 \end{array}$$

In a fraction if the denominators are equal we subtract the numerators.

Practice

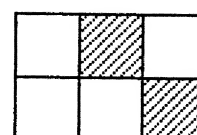
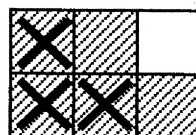
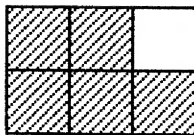
1. Write the fractions and subtract
Follow the example:

a.



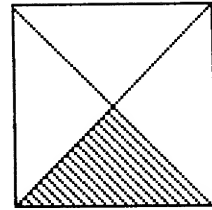
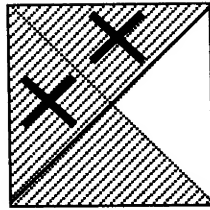
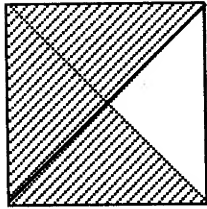
$$\frac{5}{8} - \frac{3}{8} = \frac{1}{8} = \frac{1}{4}$$

b.



$$- = =$$

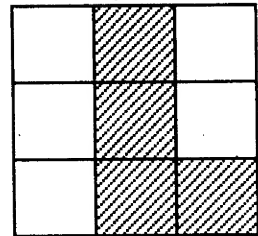
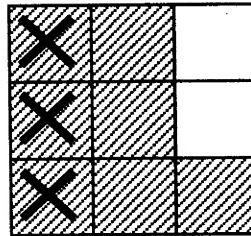
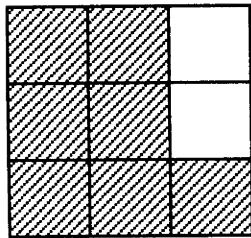
c.



-

=

d.



-

=

2. Niam cut $\frac{5}{9}$ meter of pink silk off a roll of cloth which was $\frac{8}{9}$ meter long. How much of the cloth is left?

Objective: Review addition and subtraction of fractions.

Study

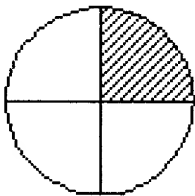
Jamshid finished $\frac{1}{8}$ of his painting on Friday. He finished $\frac{5}{8}$ of his painting on Saturday. How much of his painting was finished by Saturday night?

$$\frac{1}{8} + \frac{5}{8} = \frac{\cancel{6}}{\cancel{8}} = \frac{3}{4} \text{ of his painting was finished}$$

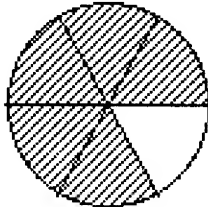
Parctice

1. Write the fraction for the shaded part and cancel.

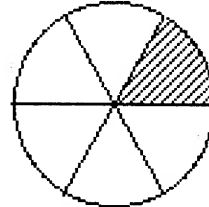
a.



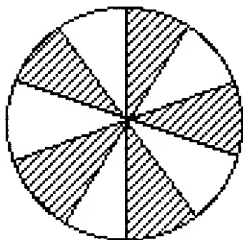
b.



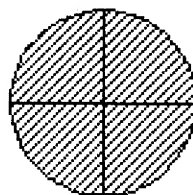
c.



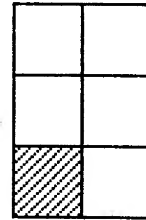
d.



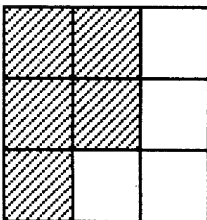
e.



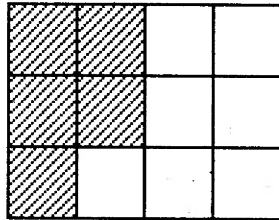
f.



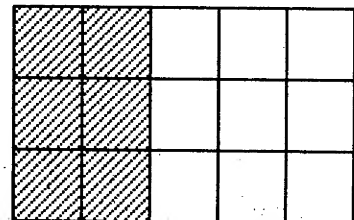
g.



h.



i.



2. add and reduce

$$\text{a. } \frac{1}{3} + \frac{2}{3} =$$

$$\text{b. } \frac{3}{5} + \frac{1}{5} =$$

$$\text{c. } \frac{5}{7} + \frac{2}{7} =$$

$$\text{d. } \frac{3}{9} + \frac{3}{9} =$$

3. Subtract and cancel

$$\text{a. } \frac{3}{4} - \frac{1}{4} =$$

$$\text{b. } \frac{3}{7} - \frac{1}{7} =$$

$$\text{c. } \frac{8}{9} - \frac{7}{9} =$$

$$\text{d. } \frac{7}{8} - \frac{5}{8} =$$

$$\text{e. } \frac{4}{5} - \frac{3}{5} =$$

$$\text{f. } \frac{3}{4} - \frac{1}{4} =$$

$$\text{g. } \frac{2}{3} - \frac{1}{3} =$$

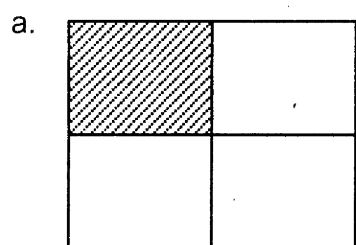
$$\text{h. } \frac{5}{6} - \frac{2}{6} =$$

4. Raqib runs $\frac{2}{5}$ mile on the first day of the trip and $\frac{1}{5}$ mile on the second day. How far did he run the first two days?

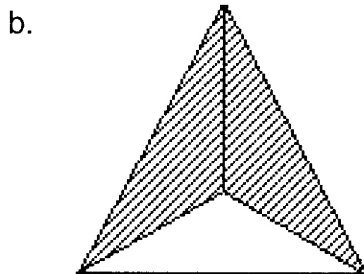
5. Rabia cut $\frac{3}{8}$ meter of pink silk off a roll of cloth which was $\frac{7}{8}$ m. long. How many meters of the cloth are left?

Objective: Assess fractions.

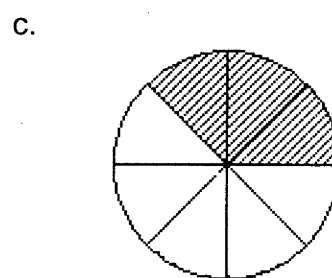
1. Choose the correct fraction.



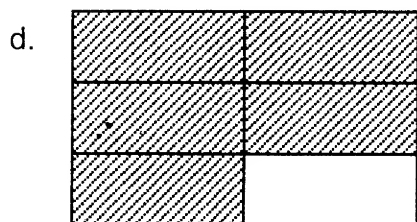
$$\frac{3}{4} \quad \frac{1}{2} \quad \frac{1}{4}$$



$$\frac{2}{3} \quad \frac{1}{3} \quad \frac{2}{4}$$



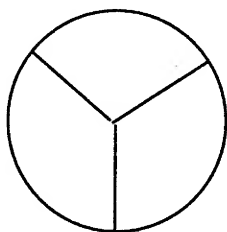
$$\frac{3}{4} \quad \frac{5}{8} \quad \frac{3}{8}$$



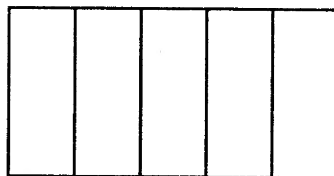
$$\frac{3}{4} \quad \frac{1}{2} \quad \frac{1}{4}$$

2. Copy the figure and colour the given fraction

One third



One fifth



3. Reduce the fractions to lowest possible terms

a. $\frac{4}{6}$

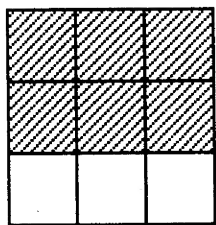
b. $\frac{3}{12}$

c. $\frac{6}{8}$

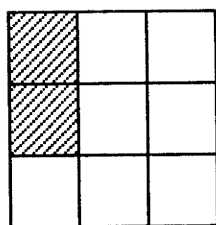
d. $\frac{2}{10}$

e. $\frac{6}{9}$

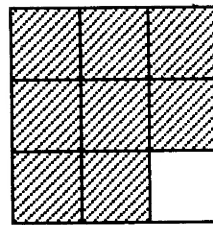
4. Write the fractions and add



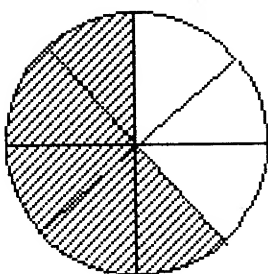
+



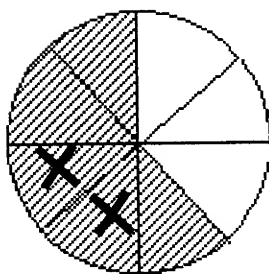
=



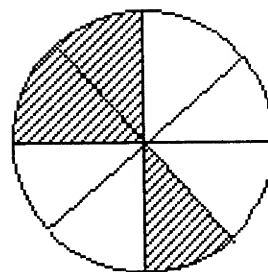
5. Write the fractions and subtract



-



=



6. Huda does $\frac{5}{8}$ of her accounts in the computer on Monday and $\frac{2}{8}$ of her accounts on Tuesday. How much of her work did she do?

7. Jamila does $\frac{5}{10}$ of her homework. Write how much of her homework she has done in the lowest possible terms.

Objective: Introduce the units of a meter.

Study

A meter is a unit of measurement. A meter has smaller units. Decimeters (dm)
Centimeters (cm), and millimeter (mm)

$$1\text{m} = 10\text{ dm}$$

$$1\text{m} = 100\text{ cm}$$

$$1\text{m} = 1000\text{ mm}$$

We use centimeters to measure short lengths and meters for longer lengths
such as the distance across a room.

Practice

1. Complete the pattern.

$$1\text{m} = \quad \text{cm}$$

$$2\text{m} = \quad \text{cm}$$

$$3\text{m} = \quad \text{cm}$$

2. Which is the better measurement, a or b for:

1) the length of a sports man s jump a) 2m b) 2cm

2) the length of a small fish a) 4m b) 4cm

3) the length of a carpet a) 3m b) 3cm

4) the width of a room a) 2m b) 2cm

3. Write the unit of measurement used in measuring:

a. Length of a carpet

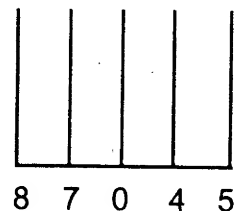
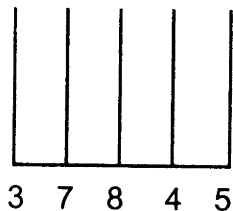
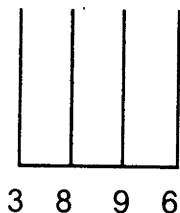
b. Width of a room

c. The length of a handkerchief

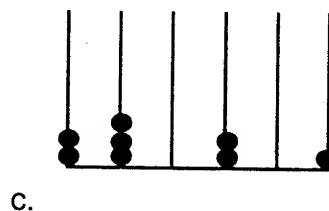
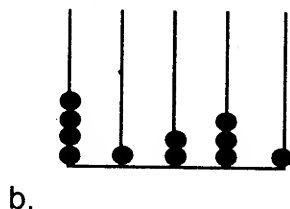
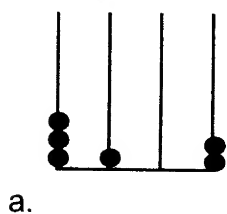
d. The length of a cloth to make a shawl

Objective: Assess place value, addition and subtraction to hundred thousand

1. Draw the abacuses and show the numbers



2. Write the numbers shown in the abacuses

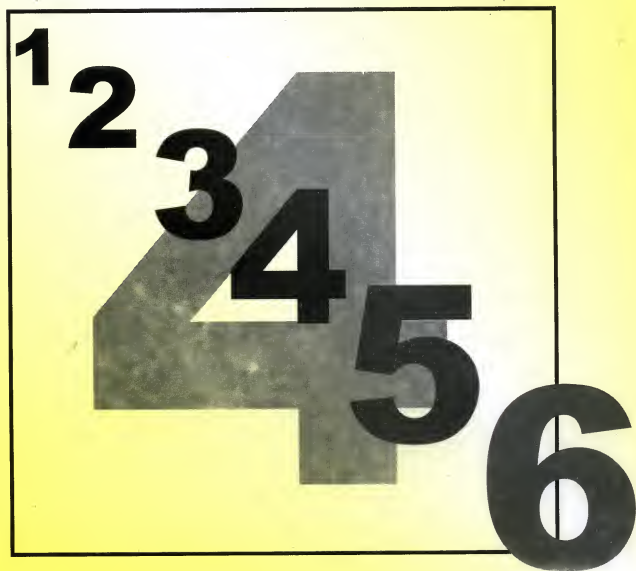


3. Write the numbers in the table.

	Thousands			Ones		
	Hundred Thousand	Ten Thousand	Thousand	Hundred	Ten	One
2,522						
9,800						
10,910						
91,240						
215,460						

Supplementary Materials
for

Mathematics



Grade Four

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



In the name of God, the gracious, the merciful

These materials were developed under the facilitation of Dr Mona Habib by representatives of the following organisations:

AGBASEd	Afghan German Basic Education
AIL	Afghan Institute of Learning
CARE - International	
CIC	Children in Crisis
GTZ-BEFARe	Basic Education for Afghan Refugees
IRC	International Rescue Committee
NAC	Norwegian Afghanistan Committee
OI	Ockenden International
QCS	Quetta City Schools
SAB	Solidarite Afghanistan Belgium
SC/US	Save the Children Federation — USA
SCA	Swedish Committee for Afghanistan
SEIAL	Sanayee Institute of Education and Learning
UNOCHA	

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